WHAT IS CLAIMED IS:

-NR-, where R is H or alkyl.

A compound having the following structure:

5 . wherein

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Z and Z_1 are the same or different and are alkyl, aralkyl, aryl, aminoalkyl, alkyloxy, aralkyloxy, alkylamino, aralkylamino, arylamino, alkylmercaptan, aralkylmercaptan, arylmercaptan, carbohydrate, nucleoside, steroid, or substituted glyceride; and X is methylene (-CH₂-), mono- or di-halo methylene, or

2. The compound of claim 1, wherein Z and Z_1 are carbohydrates and X is methylene or difluoromethylene.

3. The compound of claim 1, wherein Z and Z_1 are nucleosides and X is methylene or difluoromethylene.

4. A method for the preparation of a compound having the following structure:

25 wherein

Z and Z_1 are the same or different and are alkyl, aralkyl, aryl, aminoalkyl, alkyloxy, aralkyloxy, alkylamino, aralkylamino, arylamino, alkylmercaptan, aralkylmercaptan, arylmercaptan, carbohydrate, nucleoside, steroid, or substituted glyceride; and

X is methylene (-CH $_2$ -), mono- or di-halo methylene, or -NR-, where R is H or alkyl; which method comprises reacting a compound having the following structure:

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wherein Z and X are as described, with a dehydrating agent.

- 15 * 5. The method of claim 4, wherein the dehydrating agent is a carbodiimide.
- 76. The method of claim 5, wherein the dehydrating agent is dicyclohexylcarbodiimide or diisopropylcarbodiimide.

 - 2',3'-0-isopropylideneadenosin-5'-ylphosphonomethylenephosphonate,
 - 2', 3'-0-isopropylideneinosin-5'-ylphosphono-methylenephosphonate,
- 2',3'-0-isopropylideneguanosin-5'-ylphosphono-30 methylenephosphonate,
 - 2',3'-0-isopropylideneuridin-5'-ylphosphono-methylenephosphonate,
 - 2',3'-O-isopropylidenecytidine-5'-ylphosphono-

methylenephosphonate,

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- 3'-0-(tetrahydropyranyl)thymidin-5'-ylphosphono-methylenephosphonate,
- 2',3'-0-isopropylidenetiazofurin-5'-ylphosphonomethylenephosphonate,
 - 2',3'-O-isopropylidene-3-ribofuranosylbenzamid-5'-ylphosphono-methylenephosphonate,
 - $2',3'-0-isopropylidene-\psi-uridin-5'-ylphosphono-methylenephosphonate,$
- 10 2',3'-O-isopropylidene- ψ -isocytidin-5'-ylphosphono-methylenephosphonate,
 - 9-(2'-deoxy-2'-fluoro-3'-0-tetrahydropyranyl- β -D-arabinofuranosyl)adenine-5-ylphosphonomethylene-phosphonate,
- 9-(3'-deoxy-3'-fluoro-2'-0-tetrahydropyranyl-β-D-xylofuranosyl)adenine-5-ylphosphonomethylenephosphonate,
 - 2'-deoxy-2'-fluoro-3'-0-tetrahydropyranyl-adenosin-5-ylphosphonomethylenephosphonate,
 - 3'-deoxy-3'-fluoro-2'-O-tetrahydropyranyl-adenosin-5-yl-phosphonomethylenephosphonate,
 - 2',3'-0-isopropylidene-9-deazaadenosin-5'-ylphosphono-methylenephosphonate,
 - $\label{eq:continuous} 2', 3'-0-is opropylidene-9-deazainosin-5'-ylphosphonomethylenephosphonate,$
- 2',3'-0-isopropylidene-9-deazaguanosin-5'-ylphosphonomethylenephosphonate,
 - 2',3'-0-isopropylideneadenosin-5'-ylphosphonodifluoromethylenephosphonate,
 - 2',3'-0-isopropylideneinosin-5'-ylphosphonodifluoromethylenephosphonate,
 - 2',3'-0-isopropylideneguanosin-5'-ylphosphonodi-fluoromethylenephosphonate,
 - 3'-O-(tetrahydropyranyl)thymidin-5'-ylphosphonodi-fluoromethylenephosphonate,

- 2',3'-0-isopropylidenetiazofurin-5'-ylphosphonodi-fluoromethylenephosphonate,
- 2',3'-0-isopropylidene-3-ribosylbenzamid-5'-yl-phosphonodifluoromethylenephosphonate,
- 5 2',3'-O-isopropylidene-ψ-uridin-5'-ylphosphonodifluoromethylenephosphonate,
 - $2',3'-0-isopropylidene-\psi-isocytidin-5'-ylphosphono-difluoromethylenephosphonate,$
- 9-(2'-deoxy-2'-fluoro-3'-O-tetrahydropyranyl-β-Darabinofuranosyl)adenine-5-ylphosphonodifluoromethylenephosphonate,
 - 9-(3'-deoxy-3'-fluoro-2'-0-tetrahydropyranyl- β -D-xylofuranosyl)adenine-5-ylphosphonodifluoromethylene-phosphonate,
- 2'-deoxy-2'-fluoro-3'-O-tetrahydropyranyl-adenosin-5-ylphosphonodifluoromethylenephosphonate,

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- 3'-deoxy-3'-fluoro-2'-O-tetrahydropyranyl-adenosin-5-ylphosphonodifluoromethylenephosphonate,
- 2',3'-0-isopropylidene-9-deazaadenosin-5'-ylphosphono-difluoromethylenephosphonate,
 - $\label{eq:continuous} 2'.3'-0-is opropylidene-9-deazainosin-5'-ylphosphonodifluoromethylenephosphonate, and$
 - $\label{eq:continuous} 2', 3'-0-is opropylidene-9-deaz a guanosin-5'-ylphosphonodifluoromethylenephosphonate.$
 - 8. A method for the preparation of a compound having the following structure:

wherein

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Z and Z_1 are the same or different and are alkyl, aralkyl, aryl, aminoalkyl, alkyloxy, aralkyloxy, alkylamino, aralkylamino, arylamino, alkylmercaptan, aralkylmercaptan, arylmercaptan, carbohydrate, nucleoside, steroid, or substituted glyceride; and

X is methylene (-CH₂-), mono- or di-halo methylene, or -NR-, where R is H or alkyl; which method comprises reacting a compound having the following structure:

wherein Z, \mathbf{Z}_1 and X are as defined above, with a dehydrating agent.

9. The method of claim 8, wherein the starting material which is reacted with the dehydrating agent is selected from the group consisting of:

 P^1 , P^4 -di(adenosin-5'-yl)phosphonomethylenephosphonic P^2 , P^3 - anhydride,

p¹, p⁴-di[9-(2'-deoxy-2'-fluoro-β-D-arabono-

furanosyl) adenine-5-yl] phosphonomethylenephosphonic P^2 , P^3 -anhydride,

 p^1 , p^4 -di[9-(3'-deoxy-3'-fluoro- β -D-xylofuranosyl)-adenine-5'-yl]phosphonomethylenephosphonic P^2 , P^3 -anhydride,

 P^1 , P^4 -di(2'-deoxy-2'-fluoroadenosin-5-yl)phosphonomethylenephosphonic P^2 , P^3 -anhydride,

 p^1 , p^4 -di(3'-deoxy-3'-fluoroadenosin-5-yl)phosphono-30 methylenephosphonic p^2 , p^3 -anhydride,

P1, P4-di(inosin-5'-yl)phosphonomethylenephosphonic

P1, P4-di(guanosin-5'-y1)phosphonomethylenephosphonic p² p³ anhydride, P1, P4-di(uridin-5'-y1)phosphonomethylenephosphonic p^2, p^3 anhydride, 5 P^1 , P^4 -di(N^4 -acetylcytidin-5'-yl)phosphonomethylenephosphonic P2, P3- anhydride, P1, P4-di(thymidin-5'-y1)phosphonomethylenephosphonic p^2, p^3 anhydride, P1, P4-di(tiazifurin-5'-yl)phosphonomethylene-10 phosphonic P2, P3- anhydride, P1, P4-di(3-ribosylbenzamid-5'-yl)phosphonomethylenephosphonic P^2 , P^3 - anhydride, P^1 , P^4 -di(ψ -uridin-5'-yl)phosphonomethylenephosphonic p^2 , p^3 -anhydride, 15 P^1 , P^4 -di(ψ -isocytidin-5'-yl)phosphonomethylenephosphonic P2, P3-anhydride, p1, p4-di(9-deazaadenosin-5'-y1)phosphonomethylenephosphonic P2, P3-anhydride, p1, p4-di(9-deazainosin-5'-yl)phosphonomethylene-20 phosphonic P2, P3-anhydride, P1, P4-di(9-deazaguanosin-5'-yl)phosphonomethylenephosphonic P2, P3-anhydride, P1, P4-di(adenosin-5'-yl)phosphonodifluoromethylenephosphonic P2, P3-anhydride, 25 P1, P4-di(inosin-5'-yl)phosphonodifluoromethylenephosphonic P2, P3-anhydride, P1, P4-di(guanosin-5'-yl)phosphonodifluoromethylenephosphonic P2, P3-anhydride, P1, P4-di(thymidin-5'-yl)phosphonodifluoromethylene-30 phosphonic P2, P3-anhydride, P1, P4-di(tiazofurin-5'-yl)phosphonodifluoro-

p², p³- anhydride,

methylenephosphonic P^2 , P^3 -anhydride,

 P^1 , P^4 -di(3-ribosylbenzamid-5'-yl)phosphonodifluoro-methylenephosphonic P^2 , P^3 -anhydride,

 P^1, P^4 -di(ψ -uridin-5'-yl)phosphonodifluoromethylene-phosphonic P^2, P^3 -anhydride,

 P^1 , P^4 -di(ψ -isocytidin-5'-yl)phosphonodifluoromethylenephosphonic P^2 , P^3 -anhydride,

 P^1 , P^4 -di(9-deazaadenosin-5'-yl)phosphonodifluoro-methylenephosphonic P^2 , P^3 -anhydride,

 P^1 , P^4 -di(9-deazainosin-5'-yl)phosphonodifluoro-methylenephosphonic P^2 , P^3 -anhydride, and

 p^1 , p^4 -di(9-deazaguanosin-5'-yl)phosphonodifluoro-methylenephosphonic p^2 , p^3 -anhydride.

10. A method for the preparation of a compound having the following structure:

20 wherein

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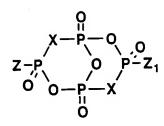
. 10

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Z and Z_1 are the same or different and are alkyl, aralkyl, aryl, aminoalkyl, alkyloxy, aralkyloxy, alkylamino, aralkylamino, arylamino, alkylmercaptan, aralkylmercaptan, arylmercaptan, carbohydrate, nucleoside, steroid, or substituted glyceride; and

X is methylene $(-CH_2-)$, mono- or di-halo methylene, or -NR-, where R is H or alkyl; which method comprises reacting a compound having the following structure:

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wherein Z, Z_1 and X are as defined above, with a nucleophilic agent.

5 11. The method of claim 10, wherein the prepared compound is selected from the group consisting of:

 $p1-(2',3'-0-Isopropylideneadenosin-5'-y1)-P^2-(2',3'-0-isopropylidene-\beta-D-ribofuranosylbenzen-3-carboxamide-5'-y1)methylenebis(phosphonate),$

 $p^1-(2',3'-0-Isopropylideneadenosin-5'-yl)-P^2-(2',3'-0-isopropylideneadenosin-5'-yl)methylenebis(phosphonate),$

p1-(2',3'-O-Isopropylideneadenosin-5'-yl)-P2-(2',3'-O-

isopropylideneguanosin-5'-yl)methylenebis(phosphonate),

p1_(2',3'-O-Isopropylideneadenosin-5'-yl)-P2-(2',3'-O-

isopropylideneuridin-5'-yl)methylenebis(phosphonate),

 $P^{1}-(2',3'-0-1)$ sopropylideneadenosin-5'-yl)- $P^{2}-(2',3'-0-1)$ isopropylidene- N^{4} -acetylcytidin-5'-yl)methylenebis-(phosphonate),

p1-(2',3'-O-Isopropylideneadenosin-5'-yl)-P2-(2',3'-O-

20 isopropylideneinosin-5'-yl)methylenebis(phosphonate),

 $p^1-(2',3'-0-1)$ sopropylideneadenosin-5'-yl)- $p^2-(2',3'-0-1)$ isopropylidenetiazofurin-5'-yl)methylenebis(phosphonate),

 $P^{1}-(2',3'-0-Isopropylideneadenosin-5'-yl)-P^{2}-(2',3'-0-1)$

isopropylidene- β -D-ribofuranosylbenzene-3-carboxamide-5'-

25 yl) methylenebis (phosphonate),

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 $\label{eq:p1-2} p_1-(2',3'-0-Isopropylideneadenosin-5'-yl)-P^2-(2',3'-0-isopropylidene-\psi-uridin-5'-yl) methylenebis (phosphonate),$

P1-(2',3'-0-Isopropylideneadenosin-5'-yl)-P2-[5-

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(2',3'-O-isopropylidene-ß-D-ribofuranosyl)nicotinamide-5'-
          yl]-methylenebis(phosphonate),
                       P1-(2',3'-O-Isopropylideneadenosin-5'-yl)-P2-[6-
           (2',3'-O-isopropylidene-ß-D-ribofuranosyl)picolinamide-5'-
           yl]methylenebis(phosphonate),
 5
                       P^1-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^2-(2',3'-O-Isopropyli
           isopropylideneguanosin-5'-yl)methylenebis(phosphonate),
                       P^1-(2',3'-0-1)sopropylideneguanosin-5'-yl)-P^2-(2',3'-0-1)
            isopropylideneuridin-5'-yl)methylenebis(phosphonate),
                        P^{1}-(2',3'-0-1)sopropylideneguanosin-5'-yl)-P^{2}-(2',3'-0-1)
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            isopropylidene-N^4-acetylcytidin-5'-yl)methylenebis-
             (phosphonate),
                        P^{1}-(2',3'-0-1)sopropylideneguanosin-5'-yl)-P^{2}-(2',3'-0-1)
             isopropylideneinosin-5'-yl)methylenebis(phosphonate),
                         P^1-(2',3'-0-1)sopropylideneguanosin-5'-yl)-P^2-(2',3'-0-1)
 15
             isopropylidenetiazofurin-5'-yl)methylenebis(phosphonate),
                         P^1-(2',3'-0-1)sopropylideneguanosin-5'-yl)-P^2-(2',3'-0-1)
             isopropylidene-\beta-D-ribofuranosyl-benzene-3-carboxamide-5'-
             yl) methylenebis (phosphonate),
                          P^{1}-(2',3'-0-1)sopropylideneguanosin-5'-yl)-P^{2}-(2',3'-0-1)
 20
              isopropylidene-\psi-uridin-5'-yl)methylenebis(phosphonate),
                          P^{1}-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^{2}-[5-
              (2',3'-0-isopropylidene-ß-D-ribofuranosyl)nicotinamide-5'-
              yl]-methylenebis(phosphonate),
                          P1-(2',3'-O-Isopropylideneguanosin-5'-yl)-P2-[6-
  25
               (2',3'-O-isopropylidene-ß-D-ribofuranosyl)picolinamide-5'-
              yl]-methylenebis(phosphonate),
                           P^{1}-(2',3'-0-Isopropylideneinosin-5'-yl)-P^{2}-(2',3'-0-Isopropylideneinosin-5'-yl)
               isopropylideneuridin-5'-yl)methylenebis(phosphonate),
                           P^{1}-(2',3'-0-Isopropylideneinosin-5'-y1)-P^{2}-(2',3'-0-Isopropylideneinosin-5'-y1)
   30
               isopropylidene-N^4-acetylcytidin-5'-yl)\, methylenebis-
                (phosphonate),
                            P^{1}-(2',3'-0-Isopropylideneinosin-5'-yl)-P^{2}-(2',3'-0-Isopropylideneinosin-5'-yl)
                isopropylideneinosin-5'-yl)methylenebis(phosphonate),
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P^{1}-(2',3'-O-Isopropylideneinosin-5'-yl)-P^{2}-(2',3'-O-Isopropylideneinosin-5'-yl)
            isopropylidenetiazofurin-5'-yl)methylenebis(phosphonate),
                         P^{1}-(2',3'-O-Isopropylideneinosin-5'-yl)-P^{2}-(2',3'-O-
            isopropylidene-\beta-D-ribofuranosylbenzene-3-carboxamide-5'-\\
            yl) methylenebis (phosphonate),
  5
                         P^{1}-(2',3'-O-Isopropylideneuridin-5'-yl)-P^{2}-(2',3'-O-
             isopropylideneguanosin-5'-yl)methylenebis(phosphonate),
                         P^{1}-(2',3'-O-Isopropylideneuridin-5'-yl)-P^{2}-(2',3'-O-
             isopropylidene-N^4-acetylcytidin-5'-yl)\, methylenebis-
              (phosphonate),
10
                          P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(2',3'-0-Isopropylideneuridin-5'-yl)
             isopropylideneuridin-5'-yl)methylenebis(phosphonate),
                          P^{1}-(2',3'-0-1)sopropylideneuridin-5'-yl)-P^{2}-(2',3'-0-1)
             isopropylidenetiazofurin-5'-yl)methylenebis(phosphonate),
                           P^{1}-(2',3'-0-Isopropylidene-N^{4}-acetylcytidin-5'-yl)-P^{2}-
15
              (2',3'-O-isopropylidene-N4-aetylcytidin-5'-yl)methylenebis-
               (phosphonate),
                           P^{1}-(2',3'-0-Isopropylidene-N<sup>4</sup>-acetylcytidin-5'-yl)-P^{2}-
               (2',3'-O-isopropylidenetiazofurin-5'-yl)methylenebis-
 20
               (phosphonate),
                           P^{1}-(2',3'-0-Isopropylidene-N<sup>4</sup>-acetylcytidin-5'-yl)-P^{2}-
               (2',3'-O-isopropylidene-\beta-D-ribofuranosylbenzene-3-
              carboxamide-5'-y1)methylenebis(phosphonate),
                            P^1-(2',3'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(2'-0-Isopropyli
               acety-3'-deoxy-3'-fluoroadenosin-5'-yl)methylenebis-
  25
                (phosphonate),
                            P^{1}-(2',3'-0-Isopropylidene-tiazofurin-5'-yl)-P^{2}-(3'-0-
               acety-2'-deoxy-2'-fluoroadenosin-5'-yl)methylenebis-
                (phosphonate),
                            P^{1}-(2',3'-0-Isopropylidene-tiazofurin-5-yl)-P^{2}-[9-(3'-1)]
  30
               \hbox{O-acetyl-2'-deoxy-2'-fluoro-$\beta-$D-arabino furanosyl) adenin-5'-}\\
                yl]methylenebis(phosphonate),
                            P^{1}-(2',3'-O-Isopropylidene-tiazofurin-5'-yl)-P^{2}-[9-Isopropylidene-tiazofurin-5'-yl)-P^{2}-[9-Isopropylidene-tiazofurin-5'-yl]
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5'-y1]methylenebis(phosphonate), $P^{1}-(2',3'-0-Isopropylidene-\beta-D-ribofuranosylbenzene-3$ carboxamide-5'-yl)-P2-[9-(3'-0-acetyl-2'-deoxy-2'-fluoroadenosin-5'-yl]methylenebis(phosphonate), 5 $P^{1}-(2',3'-0-Isopropylidene-\beta-D-ribofuranosylbenzene-3$ carboxamide-5'-yl)-P2-[9-(2'-0-acetyl-3'-deoxy-3'-fluoroadenosin-5'-yl]methylenebis(phosphonate), $P^{1}-(2',3'-0-Isopropylidene-\beta-D-ribofuranosylbenzene-3$ carboxamide-5'-yl)- P^2 -[9-(2'-0-acetyl-3'-deoxy-3'-fluoro- β -10 D-arabinofuranosyl)adenin-5'-yl]methylenebis(phosphonate), and $P^{1}-(2',3'-0-Isopropylidene-\beta-D-ribofuranosylbenzene-3 \texttt{carboxamide-5'-yl)-P^2-[9-(2'-0-acetyl-3'-deoxy-3'-fluoro-\beta-deoxy-3'-fluoro-b-de$ D-xylofuranosyl)adenin-5'-yl]methylenebis(phosphonate). 15 The method of claim 10, wherein the prepared compound is selected from the group consisting of: P^{1} -(adenosin-5'-yl)- P^{2} -(β -D-ribofuranosylbenzen-3carboxamide-5'-y1)methylenebis(phosphonate), 20 P1-(Adenosin-5'-yl)-P2-(adenosin-5'-yl)methylenebis (phosphonate), P1-(Adenosin-5'-y1)-P2-(guanosin-5'-y1)methylenebis (phosphonate), P1-(Adenosin-5'-yl)-P2-(uridin-5'-yl)methylene-25 bis (phosphonate), P^{1} -(Adenosin-5'-yl)- P^{2} -(cytidin-5'-yl)methylenebis-(phosphonate), P1-(Adenosin-5'-yl)-P2-(inosin-5'-yl)methylenebis-(phosphonate), 30 P1-(Adenosin-5'-yl)-P2-(tiazofurin-5'-yl)methylenebis (phosphonate),

 $(2'-0-acetyl-3'-deoxy-3'-fluoro-\beta-D-xylofuranosyl)$ adenin-

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P^{1}-(Adenosin-5'-yl)-P^{2}-(\beta-D-ribofuranosyl-benzene-3-
     carboxamide-5'-yl)methylenebis(phosphonate),
          P^{1}-(Adenosin-5'-yl)-P^{2}-(\psi-uridin-5'-yl)methylene-
     bis (phosphonate),
           P1-(Adenosin-5'-yl)-P2-[5-(G-D-ribofuranosyl)-
5
     nicotinamide-5'-yl]methylenebis(phosphonate),
           P1-(Adenosin-5'-yl)-P2-[6-(G-D-ribofuranosyl)-
     picolinamide-5'-yl]methylenebis(phosphonate),
           P1-(Guanosin-5'-yl)-P2-(guanosin-5'-yl)methylene-
     bis (phosphonate),
10
           P1-(Guanosin-5'-yl)-P2-(uridin-5'-yl)methylene-
     bis (phosphonate),
           P1-(Guanosin-5'-yl)-P2-(cytidin-5'-yl)methylenebis-
      (phosphonate),
           P^{1}-(Guanosin-5'-yl)-P^{2}-(inosin-5'-yl)methylenebis-
15
      (phosphonate),
           P1-(Guanosin-5'-yl)-P2-(tiazofurin-5'-yl)methylenebis-
      (phosphonate),
           P^{1}-(Guanosin-5'-yl)-P^{2}-(\beta-D-ribofuranosyl-benzene-3-
      carboxamide-5'-yl)methylenebis(phosphonate),
20
            P^{1}-(Guanosin-5'-yl)-P^{2}-(\psi-uridin-5'-yl)methylene-
      bis (phosphonate),
            P^1-(Guanosin-5'-yl)-P^2-[5-(ß-D-ribofuranosyl)-
      nicotinamide-5'-yl]methylenebis(phosphonate),
            P^{1}-(Guanosin-5'-yl)-P^{2}-[6-(ß-D-ribofuranosyl)-
 25
      picolinamide-5'-yl]methylenebis(phosphonate),
            P1-(Inosin-5'-yl)-P2-(uridin-5'-yl)methylene-
      bis (phosphonate),
            P1-(Inosin-5'-yl)-P2-(cytidin-5'-yl)methylenebis-
       (phosphonate),
 30
            P1-(Inosin-5'-y1)-P2-(inosin-5'-y1)methylenebis-
       (phosphonate),
            P^{1}-(Inosin-5'-yl)-P^{2}-(tiazofurin-5'-yl)methylenebis-
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(phosphonate),
          P^1-(Inosin-5'-yl)-P^2-(\beta-D-ribofuranosylbenzene-3-
     carboxamide-5'-yl)methylenebis(phosphonate),
          P1-(Uridin-5'-yl)-P2-(guanosin-5'-yl)methylenebis-
     (phosphonate),
5
          P1-(Uridin-5'-yl)-P2-(cytidin-5'-yl)methylenebis-
     (phosphonate),
          P1-(Uridin-5'-yl)-P2-(uridin-5'-yl)methylenebis-
     (phosphonate),
           P1-(Uridin-5'-yl)-P2-(tiazofurin-5'-yl)methylene-
10
     bis (phosphonate),
           P1-(Cytidin-5'-yl)-P2-(cytidin-5'-yl)methylenebis-
      (phosphonate),
           P1-(Cytidin-5'-yl)-P2-(tiazofurin-5'-yl)methylenebis-
      (phosphonate),
15
           P^{1}-(Cytidin-5'-yl)-P^{2}-(\beta-D-ribofuranosylbenzene-3-
     carboxamide-5'-yl)methylenebis(phosphonate),
           P1-(Tiazofurin-5-yl)-P2-(3'-deoxy-3'-fluoroadenosin-
      5'-yl)methylenebis(phosphonate),
           P1-(Tiazofurin-5-yl)-P2-(2'-deoxy-2'-fluoroadenosin-
20
      5'-y1)methylenebis(phosphonate),
           P^1-(Tiazofurin-5-yl)-P^2-[9-(2'-deoxy-2'-fluoro-\beta-D-
      arabinofuranosyl)adenin-5'-yl]methylenebis(phosphonate),
            P^1-(Tiazofurin-5-y1)-P^2-[9-(3'-deoxy-3'-fluoro-\beta-D-
      xylofuranosyl)adenin-5'-yl]methylenebis(phosphonate),
25
            P^{1}-(\beta-D-Ribofuranosylbenzene-3-carboxamide-5'-yl)-P^{2}-
      [9-(2'-deoxy-2'-fluoro-adenosin-5'-yl]methylenebis-
      (phosphonate),
            P^{1}-(\beta-D-Ribofuranosylbenzene-3-carboxamide-5'-yl)-P^{2}-
      [9-(3'-deoxy-3'-fluoroadenosin-5'-yl]methylenebis-
30
       (phosphonate),
            P^{1}-(\beta-D-Ribofuranosylbenzene-3-carboxamide-5'-yl)-P^{2}-
```

 $[9-(3'-deoxy-3'-fluoro-\beta-D-arabinofuranosyl)$ adenin-5'-yl]methylenebis(phosphonate), and P^{1} -(β -D-Ribofuranosylbenzene-3-carboxamide-5'-yl)- P^{2} -[9-(3'-deoxy-3'-fluoro- β -D-xylofuranosyl)adenin-5'yl]methylenebis(phosphonate). 5 The method of claim 10, wherein the prepared compound is selected from the group consisting of: $P^{1}-(2',3'-0-isopropylidenetiazofurin-5'-yl)-P^{2}-(2',3'-1)$ O-isopropylideneadenosin-5'-yl)difluoromethylene-10 bis (phosphonate), $P^{1}-(2',3'-0-1)$ sopropylideneadenosin-5'-yl)- $P^{2}-(2',3'-0-1)$ isopropylideneadenosin-5'-yl)difluoromethylenebis-(phosphonate), $P^{1}-(2',3'-0-1)$ sopropylideneadenosin-5'-yl)- $P^{2}-(2',3'-0-1)$ 15 isopropylideneguanosin-5'-yl)difluoromethylenebis-(phosphonate), P^{1} -(2',3'-0-Isopropylideneadenosin-5'-yl)- P^{2} -(2',3'-0isopropylideneuridin-5'-yl)difluoromethylenebis-(phosphonate), 20 P^{1} -(2',3'-O-Isopropylideneadenosin-5'-yl)- P^{2} -(2',3'-Oisopropylidene- N^4 -acetylcytidin-5'-yl)difluoromethylenebis-(phosphonate), P^{1} -(2',3'-O-Isopropylideneadenosin-5'-yl)- P^{2} -(2',3'-Oisopropylideneinosin-5'-yl)difluoromethylenebis-25 (phosphonate), $P^{1}-(2',3'-0-Isopropylideneadenosin-5'-yl)-P^{2}-(2',3'-0-Isopropylideneadenosin-5'-yl)$ isopropylidenetiazofurin-5'-yl)difluoromethylenebis-(phosphonate), P^{1} -(2',3'-O-Isopropylideneadenosin-5'-yl)- P^{2} -(2',3'-O-30 isopropylidene- β -D-ribofuranosylbenzene-3-carboxamide-5'yl)-difluoromethylenebis(phosphonate), P^{1} -(2',3'-O-Isopropylideneadenosin-5'-yl)- P^{2} -(2',3'-O-

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isopropylidene-\psi-uridin-5'-yl)difluoromethylenebis-
     (phosphonate),
           P1-(2',3'-O-Isopropylideneadenosin-5'-yl)-P2-[5-
     (2',3'-O-isopropylidene-ß-D-ribofuranosyl)nicotinamide-5'-
     yl]difluoro-methylenebis(phosphonate),
5
           P1-(2',3'-O-Isopropylideneadenosin-5'-yl)-P2-[6-
    (2',3'-O-isopropylidene-&-D-ribofuranosyl)picolinamide-5'-
     yl]difluoro-methylenebis(phosphonate),
           P^{1}-(2',3'-0-1)sopropylideneguanosin-5'-yl)-P^{2}-(2',3'-0-1)
     isopropylideneguanosin-5'-yl)difluoromethylenebis-
10
      (phosphonate),
           P^{1}-(2',3'-0-Isopropylideneguanosin-5'-yl)-P^{2}-(2',3'-0-Isopropylideneguanosin-5'-yl)
      isopropylideneuridin-5'-yl)difluoromethylenebis-
      (phosphonate),
            P^{1}-(2',3'-0-Isopropylideneguanosin-5'-yl)-P^{2}-(2',3'-0-
15
      isopropylidene-N4-acetylcytidin-5'-yl)difluoromethylenebis-
      (phosphonate),
            P^{1}-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^{2}-(2',3'-O-
      isopropylideneinosin-5'-yl)difluoromethylenebis-
       (phosphonate),
20
            P^{1}-(2',3'-0-1)sopropylideneguanosin-5'-yl)-P^{2}-(2',3'-0-1)
       isopropylidenetiazofurin-5'-yl)difluoromethylenebis-
       (phosphonate),
            P^{1}-(2',3'-0-Isopropylideneguanosin-5'-yl)-P^{2}-(2',3'-0-Isopropylideneguanosin-5'-yl)
       isopropylidene-\beta-D-ribofuranosyl-benzene-3-carboxamide-5'-
 25 Î
       yl)difluoromethylenebis(phosphonate),
             P^{1}-(2',3'-0-Isopropylideneguanosin-5'-yl)-P^{2}-(2',3'-0-Isopropylideneguanosin-5'-yl)
       isopropylidene-ψ-uridin-5'-yl)difluoromethylenebis-
       (phosphonate),
             P^{1}-(2',3'-0-Isopropylideneguanosin-5'-yl)-P^{2}-[5-
 30
       (2',3'-O-isopropylidene-ß-D-ribofuranosyl)nicotinamide-5'-
       yl]-difluoromethylenebis(phosphonate),
             P^{1}-(2',3'-0-Isopropylideneguanosin-5'-yl)-P^{2}-[6-
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(2',3'-O-isopropylidene-&-D-ribofuranosyl)picolinamide-5'-
     yl]-difluoromethylenebis(phosphonate),
           P^{1}-(2',3'-0-Isopropylideneinosin-5'-yl)-P^{2}-(2',3'-0-Isopropylideneinosin-5'-yl)
     isopropylideneuridin-5'-yl)difluoromethylenebis-
      (phosphonate),
5
            P^1-(2',3'-0-Isopropylideneinosin-5'-yl)-P^2-(2',3'-0-Isopropylideneinosin-5'-yl)
      isopropylidene-N^4-acetylcytidin-5'-yl)difluoromethylenebis-
      (phosphonate),
            P^1-(2',3'-0-Isopropylideneinosin-5'-yl)-P^2-(2',3'-0-Isopropylideneinosin-5'-yl)
      isopropylideneinosin-5'-yl)difluoromethylenebis-
10
      (phosphonate),
            P^1-(2',3'-0-Isopropylideneinosin-5'-yl)-P^2-(2',3'-0-Isopropylideneinosin-5'-yl)
      isopropylidenetiazofurin-5'-yl)difluoromethylenebis-
      (phosphonate),
            P^1-(2',3'-0-Isopropylideneinosin-5'-yl)-P^2-(2',3'-0-Isopropylideneinosin-5'-yl)
15
      isopropylidene-\beta-D-ribofuranosylbenzene-3-carboxamide-5'-
      yl)-difluoromethylenebis(phosphonate),
             P^1-(2',3'-0-Isopropylideneuridin-5'-yl)-P^2-(2',3'-0-Isopropylideneuridin-5'-yl)
       isopropylideneguanosin-5'-yl)difluoromethylenebis-
       (phosphonate),
20
             P^{1}-(2',3'-O-Isopropylideneuridin-5'-yl)-P^{2}-(2',3'-O-Isopropylideneuridin-5'-yl)
       isopropylidene-N4-acetylcytidin-5'-yl)difluoromethylenebis-
       (phosphonate),
             P^{1}-(2',3'-0-1)sopropylideneuridin-5'-yl)-P^{2}-(2',3'-0-1)
       isopropylideneuridin-5'-yl)difluoromethylenebis-
 25
       (phosphonate),
             P^1-(2',3'-0-Isopropylideneuridin-5'-yl)-P^2-(2',3'-0-Isopropylideneuridin-5'-yl)
       isopropylidenetiazofurin-5'-yl)difluoromethylenebis-
        (phosphonate),
             P^{1}-(2',3'-O-Isopropylidene-N^{4}-acetylcytidin-5'-yl)-P^{2}-
 30
        (2',3'-O-isopropylidene-N4-aetylcytidin-5'-yl)difluoro-
       methylenebis(phosphonate),
              P^{1}-(2',3'-O-Isopropylidene-N<sup>4</sup>-acetylcytidin-5'-yl)-P^{2}-
        (2',3'-O-isopropylidenetiazofurin-5'-yl)difluoromethylene-
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bis (phosphonate), $P^{1}-(2',3'-0-Isopropylidene-N^{4}-acetylcytidin-5'-yl)-P^{2}-$ (2',3'-O-isopropylidene- β -D-ribofuranosylbenzene-3carboxamide-5'-yl)difluoromethylenebis(phosphonate), $P^{1}-(2',3'-0-Isopropylidene-tiazofurin-5'-yl)-P^{2}-(2'-0-Isopropylidene-tiazofurin-5'-yl)$ 5 acety-3'-deoxy-3'-fluoroadenosin-5'-yl)difluoromethylenebis (phosphonate), $P^1-(2',3'-0-Isopropylidene-tiazofurin-5'-yl)-P^2-(3'-0-Isopropylidene-tiazofurin-5'-yl)$ acety-2'-deoxy-2'-fluoroadenosin-5'-yl)difluoromethylenebis (phosphonate), 10 $P^{1}-(2',3'-0-1)$ sopropylidene-tiazofurin-5-yl)- $P^{2}-[9-(3'-1)]$ $\hbox{O-acetyl-2'-deoxy-2'-fluoro-β-D-arabinofuranosyl) adenin-5'-}\\$ yl]-difluoromethylenebis(phosphonate), $P^{1}-(2',3'-O-Isopropylidene-tiazofurin-5'-yl)-P^{2}-[9-Isopropylidene-tiazofurin-5'-yl)-P^{2}-[9-Isopropylidene-tiazofurin-5'-yl]$ $(2'-0-acetyl-3'-deoxy-3'-fluoro-\beta-D-xylofuranosyl)$ adenin-15 5'-yl]difluoromethylenebis(phosphonate), P^{1} -(2',3'-0-Isopropylidene- β -D-ribofuranosylbenzene-3carboxamide-5'-y1)-P2-[9-(3'-0-acety1-2'-deoxy-2'-fluoroadenosin-5'-yl]difluoromethylenebis(phosphonate), P^1 -(2',3'-0-Isopropylidene- β -D-ribofuranosylbenzene-3-20 carboxamide-5'-y1)- $P^2-[9-(2'-0-acetyl-3'-deoxy-3'-fluoro-acetyl-3'-deoxy-3'-deoxy-3'-fluoro-acetyl-3'-deoxy-3'-fluoro-acetyl-3'-deoxy-3'-deo$ adenosin-5'-yl]difluoromethylenebis(phosphonate), $P^1-(2',3'-0-1)$ sopropylidene- $\beta-D-ribofurano$ sylbenzene-3carboxamide-5'-yl)- P^2 -[9-(2'-O-acetyl-3'-deoxy-3'-fluoro- β -D-arabinofuranosyl)adenin-5'-yl]difluoromethylenebis-25 (phosphonate), and P^1 -(2',3'-0-Isopropylidene- β -D-ribofuranosylbenzene-3carboxamide-5'-yl)- P^2 -[9-(2'-O-acetyl-3'-deoxy-3'-fluoro- β -D-xylofuranosyl)adenin-5'-yl]difluoromethylenebis-(phosphonate). 30

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The method of claim 10, wherein the prepared
    compound is selected from the group consisting of:
          P1-(tiazofurin-5'-yl)-P2-(adenosin-5'-yl)difluoro-
    methylenebis (phosphonate),
          P1-(Adenosin-5'-yl)-P2-(adenosin-5'-yl)difluoro-
5
     methylene-bis(phosphonate),
          P1-(Adenosin-5'-yl)-P2-(guanosin-5'-yl)difluoro-
     methylene-bis(phosphonate),
          P1-(Adenosin-5'-yl)-P2-(uridin-5'-yl)difluoro-
     methylene-bis(phosphonate),
10
           P1-(Adenosin-5'-yl)-P2-(cytidin-5'-yl)difluoro-
     methylene-bis(phosphonate),
           P1-(Adenosin-5'-yl)-P2-(inosin-5'-yl)difluoro-
     methylene-bis(phosphonate),
           P1-(Adenosin-5'-yl)-P2-(tiazofurin-5'-yl)difluoro-
15
     methylenebis (phosphonate),
           p^{1}-(Adenosin-5'-yl)-p^{2}-(\beta-D-ribofuranosylbenzene-3-
      carboxamide-5'-yl)difluoromethylenebis(phosphonate),
           P^{1}-(Adenosin-5'-yl)-P^{2}-(\psi-uridin-5'-yl)difluoro-
      methylene-bis(phosphonate),
20
            P^{1}-(Adenosin-5'-yl)-P^{2}-[5-(\beta-D-ribofuranosyl)nicotin-
      amide-5'-yl]difluoromethylenebis(phosphonate),
            P^{1}-(Adenosin-5'-yl)-P^{2}-[6-(G-D-ribofuranosyl)-
      picolinamide-5'-yl]difluoromethylenebis(phosphonate),
            P^{1}-(Guanosin-5'-yl)-P^{2}-(guanosin-5'-yl)difluoro-
 25
      methylenebis (phosphonate),
            P1-(Guanosin-5'-yl)-P2-(uridin-5'-yl)difluoro-
       methylenebis(phosphonate),
            P1-(Guanosin-5'-yl)-P2-(cytidin-5'-yl)difluoro-
       methylene-bis(phosphonate),
 30
            P^{1}-(Guanosin-5'-yl)-P^{2}-(inosin-5'-yl)difluoro-
       methylenebis(phosphonate),
            P1-(Guanosin-5'-yl)-P2-(tiazofurin-5'-yl)difluoro-
       methylenebis(phosphonate),
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P^{1}-(Guanosin-5'-yl)-P^{2}-(\beta-D-ribofuranosyl-benzene-3-
     carboxamide-5'-yl)difluoromethylenebis(phosphonate),
          P^{1}-(Guanosin-5'-yl)-P^{2}-(\psi-uridin-5'-yl)difluoro-
     methylenebis(phosphonate),
           P^{1}-(Guanosin-5'-yl)-P^{2}-[5-(\mathcal{L}-D-ribofuranosyl)-
5
     nicotinamide-5'-yl]difluoromethylenebis(phosphonate),
           P^{1}-(Guanosin-5'-yl)-P^{2}-[6-(\mathcal{L}-D-ribofuranosyl)-
     picolinamide-5'-yl]difluoromethylenebis(phosphonate),
           P^{1}-(Inosin-5'-y1)-P^{2}-(uridin-5'-y1)difluoromethylene-
     bis (phosphonate),
10
           P1-(Inosin-5'-yl)-P2-(cytidin-5'-yl)difluoro-
     methylenebis(phosphonate),
           P1-(Inosin-5'-yl)-P2-(inosin-5'-yl)difluoro-
     methylenebis (phosphonate),
           P1-(Inosin-5'-yl)-P2-(tiazofurin-5'-yl)difluoro-
15
      methylenebis(phosphonate),
           P^{1}-(Inosin-5'-yl)-P^{2}-(\beta-D-ribofuranosylbenzene-3-
      carboxamide-5'-yl)difluoromethylenebis(phosphonate),
            P1-(Uridin-5'-yl)-P2-(guanosin-5'-yl)difluoro-
      methylenebis (phosphonate),
20
            P1-(Uridin-5'-yl)-P2-(cytidin-5'-yl)difluoro-
      methylenebis(phosphonate),
            P^{1}-(Uridin-5'-yl)-P^{2}-(uridin-5'-yl)difluoromethylene-
      bis (phosphonate),
            P1-(Uridin-5'-yl)-P2-(tiazofurin-5'-yl)difluoro-
 25
      methylenebis(phosphonate),
            P1-(Cytidin-5'-yl)-P2-(cytidin-5'-yl)difluoro-
      methylenebis (phosphonate),
            P1-(Cytidin-5'-yl)-P2-(tiazofurin-5'-yl)difluoro-
       methylenebis(phosphonate),
 30
            P^{1}-(Cytidin-5'-y1)-P^{2}-(\beta-D-ribofuranosylbenzene-3-
       carboxamide-5'-yl)difluoromethylenebis(phosphonate),
            P1-(Tiazofurin-5'-yl)-P2-(3'-deoxy-3'-fluoroadenosin-
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5'-yl)difluoromethylenebis(phosphonate), P^1 -(Tiazofurin-5'-y1)- P^2 -(2'-deoxy-2'-fluoroadenosin-5'-yl)difluoromethylenebis(phosphonate), P^1 -(Tiazofurin-5-yl)- P^2 -[9-(2'-deoxy-2'-fluoro- β -Darabinofuranosyl)adenin-5'-yl]difluoromethylenebis-5 (phosphonate), P^1 -(Tiazofurin-5'-yl)- P^2 -[9-(3'-deoxy-3'-fluoro- β -Dxylofuranosyl)adenin-5'-yl]difluoromethylenebis-(phosphonate), P^{1} -(β -D-Ribofuranosylbenzene-3-carboxamide-5'-y1)- P^{2} -10 [9-(2'-deoxy-2'-fluoro-adenosin-5'-yl]difluoromethylenebis-(phosphonate), P^{1} -(β -D-Ribofuranosylbenzene-3-carboxamide-5'-yl)- P^{2} -[9-(deoxy-3'-fluoro-adenosin-5'-yl]difluoromethylenebis-(phosphonate), 15 P^{1} -(β -D-Ribofuranosylbenzene-3-carboxamide-5'-yl)- P^{2} -[9-(3'-deoxy-3'-fluoro- β -D-arabinofuranosyl)adenin-5'yl]difluoromethylenebis(phosphonate), and P^{1} -(β -D-Ribofuranosylbenzene-3-carboxamide-5'-yl)- P^{2} -[9-(3'-deoxy-3'-fluoro- β -D-xylofuranosyl)adenin-5'-yl]-20 difluoromethylenebis (phosphonate). The method of claim 10, wherein the prepared compound is selected from the group consisting of: $P^{1}-(2',3'-isopropylideneadenosin-5'-yl)-P^{2}-(benzyl)$ 25 2,3-isopropylidene- β -D-ribosid-5-yl)methylenebis-(phosphonate), $P^{1}-(2',3'-O-Isopropylideneadenosin-5'-yl)-P^{2}-(2,3-O-Isopropylideneadenosin-5'-yl)$ isopropylidene-D-ribonolacton-5-yl)methylenebis-(phosphonate), 30 $P^{1}-(2',3'-0-1)$ sopropylideneguanosin-5'-yl)- $P^{2}-(2,3,4,6-1)$

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tetra-O-acetyl-\alpha-D-mannopyranosyl)methylenebis-
      (phosphonate),
           P^1-(2',3'-0-Isopropylideneinosin-5'-yl)-P^2-(2,3-0-Isopropylideneinosin-5'-yl)
      isopropylidene-D-ribonolacton-5-yl)methylenebis-
      (phosphonate),
5
            P^{1}-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^{2}-(2,3-O-Isopropylideneguanosin-5'-yl)
      isopropylidene-D-ribonolacton-5-yl)methylenebis-
      (phosphonate),
            P^{1}-(2',3'-O-Isopropylideneuridin-5'-yl)-P^{2}-(2,3-O-Isopropylideneuridin-5'-yl)
      isopropylidene-D-ribonolacton-5-yl)methylenebis-
10
      (phosphonate),
            P^{1}-(2',3'-O-Isopropylideneuridin-5'-yl)-P^{2}-(2,3,4,6-
      tetra-O-acetyl-\beta-D-gluocopyranosyl) methylenebis-
      (phosphonate),
            P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(2,3,4,6-1)
15
      tetra-O-acetyl-\alpha-D-glucopyranosyl)methylenebis-
       (phosphonate),
            P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(2-
      acetamido-3,4,6-tri-0-acetyl-2-deoxy-6-D-gluocopyranosyl)-
      methylenebis (phosphonate),
20
             P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(2-i)
       acetamido-3,4,6-tri-0-acetyl-2-deoxy-\alpha-D-glucopyranosyl)-
       methylenebis(phosphonate),
             P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(2,3,4,6-
       tetra-O-acetyl-\beta-D-galactopyranosyl) methylenebis-
 25
       (phosphonate),
             P^{1}-(2',3'-0-Isopropylideneuridin-5'-y1)-P^{2}-(2,3,4,6-1)
       tetra-O-acetyl-\alpha-D-galactopyranosyl)methylenebis-
       (phosphonate),
             P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(2-i)
 30
       acetamido-3,4,6-tri-O-acetyl-2-deoxy-ß-D-galactopyranosyl)-
       methylenebis(phosphonate),
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P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(2-
     acetamido-3,4,6-tri-0-acetyl-2-deoxy-α-D-galactopyranosyl)-
     methylenebis (phosphonate),
           P^{1}-(2',3'-O-Isopropylideneuridin-5'-yl)-P^{2}-(2,3,4,6-
     tetra-O-acetyl-β-D-gluocopyranosyl)difluoromethylenebis-
5
     (phosphonate),
           P^1-(2',3'-0-Isopropylideneuridin-5'-yl)-P^2-(2,3,4,6-
     tetra-O-acetyl-α-D-glucopyranosyl)difluoromethylenebis-
      (phosphonate),
           P^{1}-(2',3'-0-Isopropylideneadenosin-5'-yl)-P^{2}-(2,3-0-.
10
     isopropylidene-D-ribonolacton-5-yl)difluoromethylenebis-
      (phosphonate),
           P^{1}-(2',3'-0-Isopropylideneguanosin-5'-y1)-P^{2}-(2,3-0-
     isopropylidene-D-ribonolacton-5-yl)difluoromethylenebis-
      (phosphonate),
15
           P^{1}-(2',3'-0-Isopropylideneguanosin-5'-yl)-P^{2}-(2,3,4,6-
     tetra-O-acetyl-\alpha-D-mannopyranosyl)difluoromethylenebis-
      (phosphonate),
           P^1-(2',3'-0-Isopropylideneinosin-5'-y1)-P^2-(2,3-0-1)
      isopropylidene-D-ribonolacton-5-yl)difluoromethylenebis-
20
      (phosphonate),
           P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(2,3-0-
      isopropylidene-D-ribonolacton-5-yl)difluoromethylenebis-
      (phosphonate),
           P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(2-
25
      acetamido-3,4,6-tri-0-acetyl-2-deoxy-6-D-gluocopyranosyl)-
      difluoromethylenebis (phosphonate),
           P^{1}-(2',3'-0-Isopropylideneuridin-5'-y1)-P^{2}-(2-
      acetamido-3,4,6-tri-O-acetyl-2-deoxy-α-D-glucopyranosyl)-
      difluoromethylenebis (phosphonate),
30
           P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(2,3,4,6-
      tetra-O-acetyl-β-D-galactopyranosyl)difluoromethylenebis-
```

 $P^{1}-(2',3'-0-1)$ sopropylideneuridin-5'-yl)- $P^{2}-(2,3,4,6-1)$ $\texttt{tetra-O-acetyl-} \alpha - \texttt{D-galactopyranosyl}) \, \texttt{difluoromethylenebis-}$ (phosphonate), P1-(2',3'-0-Isopropylideneuridin-5'-yl)-P2-(2-5 acetamido-3,4,6-tri-0-acetyl-2-deoxy-ß-D-galactopyranosyl)difluoromethylenebis(phosphonate), and P1-(2',3'-0-Isopropylideneuridin-5'-yl)-P2-(2 $acetamido-3,4,6-tri-O-acetyl-2-deoxy-\alpha-D-galactopyranosyl)$ difluoromethylenebis(phosphonate). 10 The method of claim 10, wherein the prepared compound is selected from the group consisting of: P1-(Adenosin-5'-yl)-P2-(D-ribose-5-yl)methylenebis-(phosphonate), 15 P^{1} -(Adenosin-5'-yl)- P^{2} -(D-ribonolacton-5-yl)methylenebis (phosphonate), P^{1} -(Guanosin-5'-yl)- P^{2} -(α -D-mannopyranosyl)methylenebis (phosphonate), P1-(Inosin-5'-yl)-P2-(D-ribonolacton-5-yl)methylene-20 bis (phosphonate), P1-(Guanosin-5'-yl)-P2-(D-ribonolacton-5-yl)methylenebis (phosphonate), P1-(Uridin-5'-yl)-P2-(D-ribonolacton-5-yl)methylenebis (phosphonate), 25 P^{1} -(Uridin-5'-yl)- P^{2} -(β -D-gluocopyranosyl)methylenebis(phosphonate), P^{1} -(Uridin-5'-yl)- P^{2} -(α -D-glucopyranosyl)methylenebis-(phosphonate), P^{1} -(Uridin-5'-yl)- P^{2} -(2-acetamido-2-deoxy- \mathcal{L} -D-30 gluocopyranosyl) methylenebis (phosphonate), P^{1} -(Uridin-5'-y1)- P^{2} -(2-acetamido-2-deoxy- α -D-

(phosphonate),

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glucopyranosyl) methylenebis (phosphonate),
           P^{1}-(Uridin-5'-yl)-P^{2}-(\beta-D-galactopyranosyl)methylene-
     bis (phosphonate),
           P^{1}-(Uridin-5'-yl)-P^{2}-(\alpha-D-galactopyranosyl)methylene-
     bis (phosphonate),
5
           P1-(Uridin-5'-y1)-P2-(2-acetamido-2-deoxy-6-D-
     galactopyranosyl)methylene-bis(phosphonate),
           P^{1}-(Uridin-5'-yl)-P^{2}-(2-acetamido-2-deoxy-\alpha-D-
     galactopyranosyl) methylenebis (phosphonate),
           P^{1}-(Uridin-5'-yl)-P^{2}-(\beta-D-gluocopyranosyl)-
10
      difluoromethylenebis (phosphonate),
            P^{1}-(Uridin-5'-yl)-P^{2}-(\alpha-D-glucopyranosyl)-
      difluoromethylenebis (phosphonate),
            P1-(Adenosin-5'-yl)-P2-(D-ribonolacton-5-yl)-
      difluoromethylenebis (phosphonate),
15
            P^{1}-(Guanosin-5'-yl)-P^{2}-(-D-ribonolacton-5-yl)-
      difluoromethylenebis (phosphonate),
            P^{1}-(Guanosin-5'-yl)-P^{2}-(\alpha-D-mannopyranosyl)-
      difluoromethylenebis(phosphonate),
            P1-(Inosin-5'-yl)-P2-(D-ribonolacton-5-yl)-
20
      difluoromethylenebis (phosphonate),
            P1-(Uridin-5'-yl)-P2-(D-ribonolacton-5-yl)-
      difluoromethylenebis (phosphonate),
            P^{1}-(Uridin-5'-y1)-P^{2}-(2-acetamido-2-deoxy-\mathcal{L}-D-
      gluocopyranosyl)difluoromethylenebis(phosphonate),
25
            P^{1}-(Uridin-5'-yl)-P^{2}-(2-acetamido-2-deoxy-\alpha-D-
      glucopyranosyl)difluoromethylenebis(phosphonate),
            P^{1}-(Uridin-5'-yl)-P^{2}-(\beta-D-galactopyranosyl)-
      difluoromethylenebis(phosphonate),
            P^{1}-(Uridin-5'-yl)-P^{2}-(\alpha-D-galactopyranosyl)-
 30
      difluoromethylenebis (phosphonate),
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P^1-(Uridin-5'-y1)-P^2-(2-acetamido-2-deoxy-\beta-D-
     galactopyranosyl)difluoro-methylenebis(phosphonate), and
           P^1-(Uridin-5'-y1)-P^2-(2-acetamido-2-deoxy-\alpha-D-
     galactopyranosyl)difluoromethylenebis(phosphonate).
5
                The method of claim 10, wherein the prepared
     compound is selected from the group consisting of:
           P1-(N4-acetyl-2',3'-O-isopropylidenecytidin-5'-yl)-P2-
      (N-acetylaminoethyl) methylenebisphosphonate,
           P1-(2',3'-0-Isopropylideneadenosin-5'-yl)-P2-(N-
10
     acetylaminoethyl) methylenebis (phosphonate),
           P1-(2',3'-O-Isopropylideneguanosin-5'-yl)-P2-(N-
      acetylaminoethyl) methylenebis (phosphonate),
           P1-(2',3'-O-Isopropylideneinosin-5'-yl)-P2-(N-
     acetylaminoethyl) methylenebis (phosphonate),
15
           P1-(2',3'-O-Isopropylideneuridin-5'-yl)-P2-(N-
      acetylaminoethyl) methylenebis (phosphonate),
           P^{1}-(2',3'-O-Isopropylidene-N<sup>4</sup>-acetylcytidin-5'-yl)-P^{2}-
      (N-acetylaminopropyl) methylenebis (phosphonate),
           P1-(2',3'-O-Isopropylideneadenosin-5'-yl)-P2-(N-
20
      acetylaminopropyl)methylenebis(phosphonate),
           P^{1}-(2',3'-0-Isopropylideneguanosin-5'-yl)-P^{2}-(N-
      acetylaminopropyl) methylenebis (phosphonate),
            P^{1}-(2',3'-0-Isopropylideneinosin-5'-yl)-P^{2}-(N-
      acetylaminopropyl)methylenebis(phosphonate),
25
            P^{1}-(2',3'-O-Isopropylideneuridin-5'-yl)-P^{2}-(N-
      acetylaminopropyl) methylenebis (phosphonate),
            P1-(2',3'-O-Isopropylidene-N4-acetylcytidin-5'-yl)-P2-
      (N-acetylaminobutyl) methylenebis (phosphonate),
            P^{1}-(2',3'-0-1)sopropylideneadenosin-5'-yl)-P^{2}-(N-1)
 30
      acetylaminobutyl) methylenebis (phosphonate),
            P1-(2',3'-O-Isopropylideneguanosin-5'-yl)-P2-(N-
      acetylaminobutyl) methylenebis (phosphonate),
            P^{1}-(2',3'-0-1)sopropylideneinosin-5'-yl)-P^{2}-(N-1)
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acetylaminobutyl) methylenebis (phosphonate),
           P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(N-
     acetylaminobutyl) methylenebis (phosphonate),
           P^{1}-(2',3'-0-Isopropylidene-N<sup>4</sup>-acetylcytidin-5'-yl)-P^{2}-
      (N-benzyloxycarbonylaminoethyl) methylenebis (phosphonate),
5
           P^{1}-(2',3'-0-Isopropylideneadenosin-5'-yl)-P^{2}-(N-
     benzyloxycarbonylaminoethyl) methylenebis (phosphonate),
           P^{1}-(2',3'-0-Isopropylideneguanosin-5'-yl)-P^{2}-(N-
     benzyloxycarbonylaminoethyl) methylenebis (phosphonate),
            P1-(2',3'-0-Isopropylideneinosin-5'-yl)-P2-(N-
10
     benzyloxycarbonylaminoethyl) methylenebis (phosphonate),
            P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(N-
      benzyloxycarbonylaminoethyl) methylenebis (phosphonate),
            P^{1}-(2',3'-O-Isopropylidene-N<sup>4</sup>-acetylcytidin-5'-yl)-P^{2}-
      (N-benzyloxycarbonylaminopropyl) methylenebis (phosphonate),
15
            P^{1}-(2',3'-0-Isopropylideneadenosin-5'-yl)-P^{2}-(N-
      benzyloxycarbonylaminopropyl)methylenebis(phosphonate),
            P^{1}-(2',3'-0-Isopropylideneguanosin-5'-y1)-P^{2}-(N-
      benzyloxycarbonylaminopropyl)methylenebis(phosphonate),
            P^{1}-(2',3'-0-1)sopropylideneinosin-5'-yl)-P^{2}-(N-1)
20
      benzyloxycarbonylaminopropyl)methylenebis(phosphonate),
            P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(N-
      benzyloxycarbonylaminopropyl)methylenebis(phosphonate),
            P^{1}-(2',3'-0-Isopropylidene-N<sup>4</sup>-acetylcytidin-5'-yl)-P^{2}-
       (N-benzyloxycarbonylaminobutyl) methylenebis (phosphonate),
25
            P^{1}-(2',3'-0-Isopropylideneadenosin-5'-y1)-P^{2}-(N-
      benzyloxycarbonylaminobutyl) methylenebis (phosphonate),
            P^{1}-(2',3'-0-Isopropylideneguanosin-5'-yl)-P^{2}-(N-
       benzyloxycarbonylaminobutyl) methylenebis (phosphonate),
            P^{1}-(2',3'-0-Isopropylideneinosin-5'-yl)-P^{2}-(N-
 30
       benzyloxycarbonylaminobutyl) methylenebis (phosphonate),
            P^{1}-(2^{\prime},3^{\prime}-0-Isopropylideneuridin-5^{\prime}-yl)-P^{2}-(N-1)
       benzyloxycarbonylaminobutyl) methylenebis (phosphonate),
             P^{1}-(2',3'-0-Isopropylidene-N<sup>4</sup>-acetylcytidin-5'-yl)-P^{2}-
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```
(N-butoxycarbonylaminoethyl) methylenebis (phosphonate),
           P^{1}-(2',3'-O-Isopropylideneadenosin-5'-yl)-P^{2}-(N-
     butoxycarbonylaminoethyl)methylenebis(phosphonate),
           P^{1}-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^{2}-(N-
     butoxycarbonylaminoethyl) methylenebis (phosphonate),
5
           P^{1}-(2',3'-O-Isopropylideneinosin-5'-yl)-P^{2}-(N-
     butoxycarbonylaminoethyl)methylenebis(phosphonate),
           P^{1}-(2',3'-0-1)sopropylideneuridin-5'-yl)-P^{2}-(N-1)
     butoxycarbonylaminoethy) methylenebis (phosphonate),
           P1-(2',3'-0-Isopropylidene-N4-acetylcytidin-5'-yl)-P2-
10
      (N-butoxycarbonylaminopropyl)methylenebis(phosphonate),
           P^{1}-(2',3'-0-1)sopropylideneadenosin-5'-yl)-P^{2}-(N-1)
     butoxycarbonylaminopropyl)methylenebis(phosphonate),
           P^{1}-(2',3'-0-1)sopropylideneguanosin-5'-yl)-P^{2}-(N-1)
     butoxycarbonylaminopropyl)methylenebis(phosphonate),
15
           P^{1}-(2',3'-O-Isopropylideneinosin-5'-yl)-P^{2}-(N-Isopropylideneinosin-5'-yl)
      butoxycarbonylaminopropyl)methylenebis(phosphonate),
           P^{1}-(2',3'-O-Isopropylideneuridin-5'-yl)-P^{2}-(N-
      butoxycarbonylaminopropyl)methylenebis(phosphonate),
            P1-(2',3'-0-Isopropylidene-N4-acetylcytidin-5'-yl)-P2-
20
      (N-butoxycarbonylaminobutyl) methylenebis (phosphonate),
            P^{1}-(2',3'-0-1)sopropylideneadenosin-5'-yl)-P^{2}-(N-1)
      butoxycarbonylaminobutyl) methylenebis (phosphonate),
            P^{1}-(2',3'-O-Isopropylideneguanosin-5'-yl)-P^{2}-(N-i)
      butoxycarbonylaminobutyl) methylenebis (phosphonate),
25
            P^{1}-(2',3'-O-Isopropylideneinosin-5'-yl)-P^{2}-(N-
      butoxycarbonylaminobutyl)methylenebis(phosphonate), and
            P^{1}-(2',3'-0-1)sopropylideneuridin-5'-yl)-P^{2}-(N-1)
      butoxycarbonylaminobutyl) methylenebis (phosphonate).
 30
                 The method of claim 10, wherein the prepared
      compound is selected from the group consisting of:
            P^{1}-(Cytidin-5'-yl)-P^{2}-(N-acetylaminoethyl)methylene-
      bis (phosphonate),
```

```
P^{1}-(Adenosin-5'-yl)-P^{2}-(N-acetylaminoethyl)methylene-
     bis(phosphonate),
           P^{1}-(Guanosin-5'-yl)-P^{2}-(N-acetylaminoethyl)methylene-
     bis (phosphonate),
           P^{1}-(Inosin-5'-yl)-P^{2}-(N-acetylaminoethyl)methylenebis-
5
      (phosphonate),
           P^{1}-(Uridin-5'-yl)-P^{2}-(N-acetylaminoethyl)methylenebis-
      (phosphonate),
           P^{1}-(Cytidin-5'-yl)-P^{2}-(N-acetylaminopropyl)methylene-
10
     bis (phosphonate),
           P1-(Adenosin-5'-y1)-P2-(N-acetylaminopropyl)methylene-
      bis (phosphonate),
           P^{1}-(Guanosin-5'-y1)-P^{2}-(N-acetylaminopropyl)methylene-
      bis (phosphonate),
            P1-(Inosin-5'-y1)-P2-(N-acetylaminopropyl)methylene-
15
      bis (phosphonate),
            P^{1}-(Uridin-5'-yl)-P^{2}-(N-acetylaminopropyl)methylene-
      bis (phosphonate),
            P^{1}-(Cytidin-5'-yl)-P^{2}-(N-acetylaminobutyl)methylene-
      bis (phosphonate),
20
            P^{1}-(Adenosin-5'-yl)-P^{2}-(N-acetylaminobutyl)methylene-
      bis (phosphonate),
            P^{1}-(Guanosin-5'-yl)-P^{2}-(N-acetylaminobutyl)methylene-
      bis (phosphonate),
            P^{1}-(Inosin-5'-y1)-P^{2}-(N-acetylaminobutyl)methylenebis-
 25
       (phosphonate),
            P^{1}-(Uridin-5'-yl)-P^{2}-(N-acetylaminobutyl)methylenebis-
       (phosphonate),
            P^{1}-(Cytidin-5'-yl)-P^{2}-(N-benzyloxycarbonylaminoethyl)-
       methylenebis (phosphonate),
 30
            P1-(Adenosin-5'-yl)-P2-(N-benzyloxycarbonylamino-
       ethyl)methylenebis(phosphonate),
            P1-(Guanosin-5'-yl)-P2-(N-benzyloxycarbonylamino-
       ethyl)methylenebis(phosphonate),
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```
P^{1}-(Inosin-5'-yl)-P^{2}-(N-benzyloxycarbonylaminoethyl)-
     methylenebis (phosphonate),
           P1-(Uridin-5'-yl)-P2-(N-benzyloxycarbonylaminoethyl)-
     methylenebis (phosphonate),
           P1-(Cytidin-5'-yl)-P2-(N-benzyloxycarbonylamino-
5
     propyl)methylenebis(phosphonate),
           P1-(Adenosin-5'-yl)-P2-(N-benzyloxycarbonylamino-
     propyl)methylenebis(phosphonate),
           P1-(Guanosin-5'-yl)-P2-(N-benzyloxycarbonylamino-
     propyl) methylenebis (phosphonate),
10
           P^{1}-(Inosin-5'-yl)-P^{2}-(N-benzyloxycarbonylaminopropyl)-
     methylenebis (phosphonate),
           P^{1}-(Uridin-5'-yl)-P^{2}-(N-benzyloxycarbonylaminopropyl)-
     methylenebis (phosphonate),
           P^{1}-(Cytidin-5'-yl)-P^{2}-(N-benzyloxycarbonylaminobutyl)-
15
      methylenebis (phosphonate),
           P1-(Adenosin-5'-yl)-P2-(N-benzyloxycarbonylamino-
      butyl) methylenebis (phosphonate),
           P1-(Guanosin-5'-y1)-P2-(N-benzyloxycarbonylamino-
      butyl) methylenebis (phosphonate),
20
           P1-(Inosin-5'-y1)-P2-(N-benzyloxycarbonylaminobutyl)-
      methylenebis (phosphonate),
            P^{1}-(Uridin-5'-yl)-P^{2}-(N-benzyloxycarbonylaminobutyl)-
      methylenebis (phosphonate),
            P^{1}-(Cytidin-5'-yl)-P^{2}-(N-butoxycarbonylaminoethyl)-
25
      methylenebis (phosphonate),
            P1-(Adenosin-5'-yl)-P2-(N-butoxycarbonylaminoethyl)-
      methylenebis (phosphonate),
            P^1-(Guanosin-5'-y1)-P^2-(N-butoxycarbonylaminoethy1)-
      methylenebis (phosphonate),
30.
            P^{1}-(Inosin-5'-y1)-P^{2}-(N-butoxycarbonylaminoethy1)-
      methylenebis (phosphonate),
            P^{1}-(Uridin-5'-yl)-P^{2}-(N-butoxycarbonylaminoethy)-
      methylenebis(phosphonate),
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```
P1-(Cytidin-5'-yl)-P2-(N-butoxycarbonylaminopropyl)-
     methylenebis (phosphonate),
           P1-(Adenosin-5'-yl)-P2-(N-butoxycarbonylaminopropyl)-
     methylenebis (phosphonate),
           P1-(Guanosin-5'-yl)-P2-(N-butoxycarbonylaminopropyl)-
 5
     methylenebis (phosphonate),
           P1-(Inosin-5'-yl)-P2-(N-butoxycarbonylaminopropyl)-
     methylenebis (phosphonate),
           P1-(Uridin-5'-yl)-P2-(N-butoxycarbonylaminopropyl)-
     methylenebis (phosphonate),
10
           P^{1}-(Cytidin-5'-y1)-P^{2}-(N-butoxycarbonylaminobuty1)-
     methylenebis (phosphonate),
           P1-(Adenosin-5'-y1)-P2-(N-butoxycarbonylaminobuty1)-
     methylenebis (phosphonate),
           P1-(Guanosin-5'-yl)-P2-(N-butoxycarbonylaminobutyl)-
15
     methylenebis (phosphonate),
           P1-(Inosin-5'-yl)-P2-(N-butoxycarbonylaminobutyl)-
      methylenebis (phosphonate), and
           P1-(Uridin-5'-yl)-P2-(N-butoxycarbonylaminobutyl)-
      methylenebis (phosphonate).
20
                 The method of claim 10, wherein the prepared
      compound is selected from the group consisting of:
            the methylenebis(phosphonate) analogue of flavin
      adenine dinucleotide,
25
            P^{1}-(2',3'-0-Isopropylideneadenosin-5'-yl)-P^{2}-(ethyl)
      2,4-dihydroxy-3,3-dimethylbutyrate-4-yl)methylenebis-
      (phosphonate),
            P^{1}-(2',3'-0-Isopropylideneadenosin-5'-yl)-P^{2}-(2,4-
      \texttt{dihydroxy-3,3-dimethylbutyryl-}\beta\text{-}\texttt{alanyl-}\beta\text{-}\texttt{aminoethanethil-S-}
 30
      acetyl-4-yl) methylenebis (phosphonate),
            P1-(2',3'-0-Isopropylideneguanosin-5'-yl)-P2-
      (riboflavin-5'-yl)methylenebis(phosphonate),
            P^{1}-(2',3'-0-Isopropylideneguanosin-5'-yl)-P^{2}-(ethyl
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2,4-dihydroxy-3,3-dimethylbutyrate-4-yl)methylenebis-
     (phosphonate),
          P^{1}-(2',3'-0-Isopropylideneguanosin-5'-yl)-P^{2}-(2,4-
     dihydroxy-3,3-dimethylbutyryl-\beta-alanyl-\beta-aminoethanethiol-
     S-acetyl-4-yl)methylenebis(phosphonate),
5
           P1-(2',3'-0-Isopropylideneinosin-5'-yl)-P2-
     (riboflavin-5'-yl)methylenebis(phosphonate),
           P1-(2',3'-0-Isopropylideneinosin-5'-yl)-P2-(ethyl 2,4-
     dihydroxy-3,3-dimethylbutyrate-4-yl)methylenebis-
      (phosphonate),
10
           P^{1}-(2',3'-0-Isopropylideneinosin-5'-yl)-P^{2}-(2,4-
     \texttt{dihydroxy-3,3-dimethylbutyryl-}\beta\text{-alanyl-}\beta\text{-aminoethanethiol-}
     S-acetyl-4-yl)methylenebis(phosphonate),
           P1-(2',3'-0-Isopropylideneuridin-5'-yl)-P2-
      (riboflavin-5'-yl)methylenebis(phosphonate),
15
           P1-(2',3'-0-Isopropylideneuridin-5'-yl)-P2-(ethyl 2,4-
      dihydroxy-3,3-dimethylbutyrate-4-yl)methylenebis-
      (phosphonate),
           P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(2,4-
      \texttt{dihydroxy-3,3-dimethylbutyryl-}\beta\text{-alanyl-}\beta\text{-aminoethanethiol-}
20
      S-acetyl-4-yl)methylenebis(phosphonate),
            P1-(2',3'-0-Isopropylidene-N4-acetylcytidin-5'-yl)-P2-
      (riboflavin-5'-yl)methylenebis(phosphonate),
            P1-(2',3'-0-Isopropylidene-N4-acetylcytidin-5'-yl)-P2-
      (ethyl 2,4-dihydroxy-3,3-dimethylbutyrate-4-
25
      yl) methylenebis-(phosphonate), and
            P1-(2',3'-0-Isopropylidenė-N4-acetylcytidin-5'-yl)-P2-
      (2,4-dihydroxy-3,3-dimethylbutyryl-\beta-alanyl-\beta-
      aminoethanethiol-S-acetyl-4-yl)methylenebis(phosphonate).
 30
                 The method of claim 10, wherein the prepared
      compound is selected from the group consisting of:
            P1-(adenosin-5'-yl)-P2-(riboflavin-5'-yl)methylene-
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bis (phosphonate),
           P^{1}-(Adenosin-5'-yl)-P^{2}-(ethyl-2,4-dihydroxy-3,3-
     dimethylbutyrate-4-yl)methylenebis(phosphonate),
           P^{1}-(Adenosin-5'-yl)-P^{2}-(2,4-dihydroxy-3,3-
     {\tt dimethylbutyryl-\beta-alanyl-\beta-aminoethanethil-S-acetyl-4-}
5
     yl) methylenebis (phosphonate),
            P1-(Guanosin-5'-yl)-P2-(riboflavin-5'-yl)methylenebis-
      (phosphonate),
            P^1-(Guanosin-5'-yl)-P^2-(ethyl-2,4-dihydroxy-3,3-
     dimethylbutyrate-4-yl)methylenebis-(phosphonate),
10
            P^1-(Guanosin-5'-yl)-P^2-(2,4-dihydroxy-3,3-
      \texttt{dimethylbutyryl-}\beta\text{-}\texttt{alanyl-}\beta\text{-}\texttt{aminoethanethiol-}S\text{-}\texttt{acetyl-4}\text{-}
      yl) methylenebis (phosphonate),
            P1-(Inosin-5'-yl)-P2-(riboflavin-5'-yl)methylenebis-
      (phosphonate),
15
            P^{1}-(Inosin-5'-yl)-P^{2}-(ethyl-2,4-dihydroxy-3,3-
      dimethylbutyrate-4-yl)methylenebis(phosphonate),
            P^{1}-(Inosin-5'-v1)-P^{2}-(2,4-dihydroxy-3,3-
      dimethylbutyryl-\beta-alanyl-\beta-aminoethanethiol-S-acetyl-4-
      yl) methylenebis-(phosphonate),
20
            P1-(Uridin-5'-yl)-P2-(riboflavin-5'-yl)methylenebis-
       (phosphonate),
             P^{1}-(Uridin-5'-yl)-P^{2}-(ethyl-2,4-dihydroxy-3,3-
      dimethylbutyrate-4-yl)methylenebis(phosphonate),
             P^{1}-(Uridin-5'-y1)-P^{2}-(2,4-dihydroxy-3,3-
25
      dimethylbutyryl-\beta-alanyl-\beta-aminoethanethiol-4-
      yl) methylenebis (phosphonate),
             P1-(Cytidin-5'-yl)-P2-(riboflavin-5'-yl)methylenebis-
       (phosphonate),
             P^{1}-(Cytidin-5'-yl)-P^{2}-(ethyl-2,4-dihydroxy-3,3-
 30
       dimethylbutyrate-4-yl)methylenebis(phosphonate), and
             P^{1}-(Cytidin-5'-yl)-P^{2}-(2,4-dihydroxy-3,3-
       \texttt{dimethylbutyryl-}\beta\text{-}\texttt{alanyl-}\beta\text{-}\texttt{aminoethanethiol-4-}
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yl) methylenebis (phosphonate).

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The method of claim 10, wherein the prepared
     compound is selected from the group consisting of:
           P1-5'-0-(2',3'-0-Isopropylidene-N4-acetylcytidin-5-
5
     v1)-P2-O-(1,2-dipalmitoyl-sn-glycer-1-yl)methylenebis-
      (phosphonate),
           P^{1}-(2',3'-0-1)sopropylideneadenosin-5'-yl)-P^{2}-(2,3-di-1)
     O-palmitoylglycer-1-yl)methylenebis(phosphonate),
           P^{1}-(2',3'-0-Isopropylideneguanosin-5'-yl)-P^{2}-(2,3-di-1)
10
     O-palmitoylglycer-1-yl)methylenebis(phosphonate),
           P^1-(2',3'-0-Isopropylideneinosin-5'-yl)-P^2-(2,3-di-0-1)
     palmitoylglycer-1-yl)methylenebis(phosphonate),
           P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(2,3-di-0-1)
     palmitoylglycer-1-yl)methylenebis(phosphonate),
15
           P^{1}-(2',3'-0-1)sopropylideneadenosin-5'-yl)-P^{2}-(2,3-di-1)
      O-laurylglycer-1-yl)methylenebis(phosphonate),
           P^{1}-(2',3'-0-1)sopropylideneguanosin-5'-yl)-P^{2}-(2,3-di-1)
      O-laurylglycer-1-yl)methylenebis(phosphonate),
            P^{1}-(2',3'-0-Isopropylideneinosin-5'-yl)-P^{2}-(2,3-di-0-1)
20
      laurylglycer-1-yl)methylenebis(phosphonate),
            P^{1}-(2',3'-O-Isopropylideneuridin-5'-yl)-P^{2}-(2,3-di-O-isopropylideneuridin-5'-yl)
      laurylglycer-1-yl)methylenebis(phosphonate),
            P1-(2',3'-0-Isopropylidene-N4-acetylcytidin-5'-yl)-P2-
      (2,3-di-O-lauylglycer-1-yl)methylenebis(phosphonate),
25
            P^{1}-(2',3'-0-1)sopropylideneadenosin-5'-yl)-P^{2}-(2,3-di-1)
      O-myristoylglycer-1-yl)methylenebis(phosphonate),
            P1-(2',3'-0-Isopropylideneguanosin-5'-yl)-P2-(2,3-di-
      O-myristoylglycer-1-yl)methylenebis(phosphonate),
            P^{1}-(2',3'-O-Isopropylideneinosin-5'-yl)-P^{2}-(2,3-di-O-Isopropylideneinosin-5'-yl)
30
      myristoylglycer-1-yl)methylenebis(phosphonate),
            P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(2,3-di-0-1)
      myristoylglycer-1-yl)methylenebis(phosphonate),
            P1-(2',3'-O-Isopropylidene-N4-acetylcytidin-5'-yl)-P2-
```

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(2,3-di-O-myristoylglycer-1-yl)methylenebis(phosphonate),
           P^{1}-(2',3'-0-1)sopropylideneadenosin-5'-yl)-P^{2}-(2,3-di-1)
     O-stearylglycer-1-yl)methylenebis(phosphonate),
           P^{1}-(2',3'-0-1)sopropylideneguanosin-5'-yl)-P^{2}-(2,3-di-1)
     O-stearylglycer-1-yl)methylenebis(phosphonate),
5
           P^{1}-(2',3'-0-1)sopropylideneinosin-5'-yl)-P^{2}-(2,3-di-0-1)
     stearylglycer-1-yl)methylenebis(phosphonate),
           P^{1}-(2',3'-0-1)sopropylideneuridin-5'-yl)-P^{2}-(2,3-di-0-1)
     stearylglycer-1-yl)methylenebis(phosphonate),
           P^{1}-(2',3'-0-Isopropylidene-N<sup>4</sup>-acetylcytidin-5'-yl)-P^{2}-
10
      (2,3-di-O-stearylglycer-1-yl)methylenebis(phosphonate),
           P^{1}-(2',3'-0-1)sopropylideneadenosin-5'-yl)-P^{2}-(2,3-di-1)
     O-oleylglycer-1-yl)methylenebis(phosphonate),
           P^{1}-(2',3'-0-Isopropylideneguanosin-5'-yl)-P^{2}-(2,3-di-1)
      O-oleylglycer-1-yl)methylenebis(phosphonate),
15
           P^{1}-(2',3'-0-1)sopropylideneinosin-5'-yl)-P^{2}-(2,3-di-0-1)
      oleylglycer-1-yl)methylenebis(phosphonate),
            P^{1}-(2',3'-O-Isopropylideneuridin-5'-yl)-P^{2}-(2,3-di-O-
      oleylglycer-1-yl)methylenebis(phosphonate),
            P^{1}-(2',3'-0-Isopropylidene-N<sup>4</sup>-acetylcytidin-5'-yl)-P^{2}-
20
      (2,3-di-0-oleylglycer-1-yl)methylenebis(phosphonate),
            P^{1}-(2',3'-O-Isopropylideneadenosin-5'-yl)-P^{2}-(2,3-di-1)
      Q-linoleylglycer-1-yl)methylenebis(phosphonate),
            P^{1}-(2',3'-0-Isopropylideneguanosin-5'-yl)-P^{2}-(2,3-di-
      O-linoleylglycer-1-yl)methylenebis(phosphonate),
25
            P^{1}-(2',3'-0-Isopropylideneinosin-5'-yl)-P^{2}-(2,3-di-0-1)
      linoleylglycer-1-yl)methylenebis(phosphonate),
            P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(2,3-di-0-1)
      linoleylglycer-1-yl)methylenebis(phosphonate),
            P^{1}-(2',3'-0-Isopropylidene-N^{4}-acetylcytidin-5'-yl)-P^{2}-
30
      (2,3-di-O-linoleylglycer-1-yl)methylenebis(phosphonate),
            P^{1}-(2',3'-0-1)sopropylideneadenosin-5'-yl)-P^{2}-(2,3-di-1)
      O-linolenylglycer-1-yl)methylenebis(phosphonate),
            P^{1}-(2',3'-0-Isopropylideneguanosin-5'-yl)-P^{2}-(2,3-di-1)
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O-linolenylglycer-1-yl)methylenebis(phosphonate),
          P^1-(2',3'-0-1)sopropylideneinosin-5'-yl)-P^2-(2,3-di-0-1)
     linolenylglycer-1-yl)methylenebis(phosphonate),
          P^{1}-(2',3'-0-Isopropylideneuridin-5'-yl)-P^{2}-(2,3-di-0-
     linolenylglycer-1-yl)methylenebis(phosphonate), and
5
          P1-(2',3'-0-Isopropylidene-N4-acetylcytidin-5'-v1)-P2-
     (2,3-di-O-linolenylglycer-1-yl)methylenebis(phosphonate).
                The method of claim 10, wherein the prepared
     compound is selected from the group consisting of:
10
          N^{1}-(n-butan-4-y1)-2',3'-0-isopropylideneinosin-5'-yl
     cyclic P1, P2-methylenebis (phosphonate),
           N^{1}-(n-Butan-4-y1)-2',3'-0-isopropylideneadeosin-5'-yl
     cyclic P1, P2-methylenebis (phosphonate),
          N^{1}-(n-Butan-4-y1)-2',3'-O-isopropylideneguanosin-5'-yl
15
     cyclic P1, P2-methylenebis (phosphonate),
           N^{1}-(n-Butan-4-yl)-2',3'-0-isopropylideneuridin-5'-yl
     cyclic P1, P2-methylenebis (phosphonate),
           N^{1}-(n-Butan-4-y1)-2',3'-0-isopropylidene-N^{4}-
      acetylcytidin-5'-yl cyclic P1, P2-methylenebis (phosphonate),
20
           N1-(2,3-Dihydroxy-4-hydroxymethylcyclopentan-6-yl)-
     2',3'-0-isopropylideneadeosin-5'-yl cyclic P1, P2-
      methylenebis (phosphonate),
           N^{1}-(2,3-Dihydroxy-4-hydroxymethylcyclopentan-6-yl)-
      2',3'-O-isopropylideneguanosin-5'-yl cyclic P1, P2-
25
      methylenebis (phosphonate),
           N^{1}-(2,3-Dihydroxy-4-hydroxymethylcyclopentan-6-yl)-
      2',3'-O-isopropylideneinosin-5'-yl cyclic P1, P2-
      methylenebis-(phosphonate),
           N^{1}-(2,3-Dihydroxy-4-hydroxymethylcyclopentan-6-yl)-
30
      2',3'-O-isopropylideneuridin-5'-yl cyclic P1, P2-
      methylenebis (phosphonate),
           N1-(2,3-Dihydroxy-4-hydroxymethylcyclopentan-6-yl)-
      2',3'-O-isopropylidene-N4-acetylcytidin-5'-yl cyclic P1, P2-
```

methylenebis(phosphonate),

 N^1 -(Ethoxymethan-2-yl)-2',3'-0-isopropylideneadeosin-5'-yl cyclic P^1 , P^2 -methylenebis(phosphonate),

 N^1 -(Ethoxymethan-2-yl)-2',3'-O-isopropylideneguanosin-

5 5'-yl cyclic P1, P2-methylenebis (phosphonate),

 N^1 -(Ethoxymethan-2-yl)-2',3'-O-isopropylideneinosin-5'-yl cyclic P^1 , P^2 -methylenebis-(phosphonate),

 N^1 -(Ethoxymethan-2-yl)-2',3'-O-isopropylideneuridin-5'-yl cyclic P^1,P^2 -methylenebis(phosphonate), and

10 N^{1} -(Ethoxymethan-2-yl)-2',3'-O-isopropylidene- N^{4} acetylcytidin-5'-yl cyclic P^{1} , P^{2} -methylenebis(phosphonate).

23. A compound having the following structure:

15

wherein

Z and Z_1 are the same or different and are alkyl, aralkyl, aryl, aminoalkyl, alkyloxy, aralkyloxy, alkylamino, aralkylamino, arylamino, alkylmercaptan, aralkylmercaptan, arylmercaptan, carbohydrate, nucleoside, steroid, or substituted glyceride; and

X is methylene (-CH $_2$ -), mono- or di-halo methylene, or -NR-, where R is H or alkyl.

25

24. A compound having the following structure:

wherein

5

10

15

20

25

each of R_1 , R_2 , R_3 , and R_4 is independently H, OH or F; X is O, S, mono- or di-halomethylene, or NR wherein R is H or alkyl, or CH_2 ;

Y is OH, SH or F; and each of W_1 and W_2 is independently H, OH, =O, OR, SH, SR, NH₂, NHR or NR₂, wherein R is C_1 - C_5 alkyl and n is an integer from 1 to 5.

25. The compound of claim 24, wherein the compound is selected from the group consisting of:

P1-(2',3'-O-isopropylideneadenosin-5'-yl)-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhex-2'-ene-6'-yl)methylene-bis(phosphonate),

methylpent-2'-ene-5'-yl)]methylene-bis(phosphonate),

pl-(2',3'-0-isopropylideneadenosin-5'-yl)-p2-[7hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'methylhept-2'-ene-7'-yl)]methylene-bis(phosphonate),

P1-(2',3'-O-isopropylideneadenosin-5'-yl)-P2-[7-

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hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
     methylocta-2'-ene-8'-yl)]methylene-bis(phosphonate),
          P1-(3'-0-acetyl-2'-fluoro-2'-deoxyadenosin-5'-yl)-P2-
     [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
     methylbut-2'-ene-4'-yl)]methylene-bis(phosphonate),
5
          P1-(3'-O-acetyl-2'-fluoro-2'-deoxyadenosin-5'-yl)-P2-
     [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
     methylpent-2'-ene-5'-yl)]methylene-bis(phosphonate),
          P1-(3'-O-acetyl-2'-fluoro-2'-deoxyadenosin-5'-yl)-P2-
     [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
10
     methylhex-2'-ene-6'-yl)]methylene-bis(phosphonate),
           P^1-(3'-O-acetyl-2'-fluoro-2'-deoxyadenosin-5'-yl)-P^2-
      (7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
     methylhept-2'-ene-7'-yl)]methylene-bis(phosphonate),
           P^{1}-(3'-0-acetyl-2'-fluoro-2'-deoxyadenosin-5'-yl)-P^{2}-
15
      [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
     methyloct-2'-ene-8'-yl)]methylene-bis(phosphonate),
           P^{1}-(2'-O-acetyl-3'-fluoro-3'-deoxyadenosin-5'-yl)-P^{2}-
      [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
      methylbut-2'-ene-4'-yl)]methylene-bis(phosphonate),
20
           p^1-(2'-0-acetyl-3'-fluoro-3'-deoxyadenosin-5'-yl)-p^2-
      [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
      methylpent-2'-ene-5'-yl)]methylene-bis(phosphonate),
           P^{1}-(2'-O-acetyl-3'-fluoro-3'-deoxyadenosin-5'-yl)-P^{2}-
      [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
25
      methylhex-2'-ene-6'-yl)]methylene-bis(phosphonate),
           P^1-(2'-O-acetyl-3'-fluoro-3'-deoxyadenosin-5'-yl)-P^2-
      (7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
      methylhept-2'-ene-7'-yl)]methylene-bis(phosphonate),
            P^{1}-(2'-O-acetyl-3'-fluoro-3'-deoxyadenosin-5'-yl)-P^{2}-
 30
       [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
      methyloct-2'-ene-8'-yl)]methylene-bis(phosphonate),
            P1-[9-(3'-0-acetyl-2'-fluoro-2'-deoxy-ß-D-
      arabinofuranosyl)adenin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-
      methyl-phthalan-1-on-6-yl-(3'-methylbut-2'-ene-4'-
 35
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yl)]methylenebis(phosphonate),
          P1-[9-(3'-O-acetyl-2'-fluoro-2'-deoxy-&-D-
    arabinofuranosyl)adenin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-
    methyl-phthalan-1-on-6-yl-(3'-methylpent-2-ene-5'-
    yl)]methylenebis(phosphonate),
5
          P1-[9-(3'-O-acetyl-2'-fluoro-2'-deoxy-&-D-
     arabinofuranosyl)adenin-5'-yl}-P2-[7-hydroxy-5-methoxy-4-
     methyl-phthalan-1-on-6-yl-(3'-methylhex-2'-ene-6'-
     yl)]methylenebis(phosphonate),
          p1-[9-(3'-O-acetyl-2'-fluoro-2'-deoxy-&-D-
10
     arabinofuranosyl)adenin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-.
     methyl-phthalan-1-on-6-yl-(3'-methylhept-2-ene-7'-
     yl)]methylenebis(phosphonate),
          p1-[9-(3'-0-acetyl-2'-fluoro-2'-deoxy-&-D-
     arabinofuranosyl)adenin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-
15
     methyl-phthalan-1-on-6-yl-(3'-methyloct-ene-8'-
     yl)]methylenebis(phosphonate),
           p1_[9-(2'-O-acetyl-3'-fluoro-3'-deoxy-£-D-
     arabinofuranosyl)adenin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-
     methyl-phthalan-1-on-6-yl-(3'-methylbut-2-ene-4'-
20
     yl)]methylenebis(phosphonate),
           P1-[9-(2'-O-acetyl-3'-fluoro-3'-deoxy-&-D-
     arabinofuranosyl)adenin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-
     methyl-phthalan-1-on-6-yl-(3'-methylpent-2-ene-5'-
     yl)]methylenebis(phosphonate),
25
           P1-[9-(2'-O-acetyl-3'-fluoro-3'-deoxy-£-D-
     arabinofuranosyl)adenin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-
      methyl-phthalan-1-on-6-yl-(3'-methylhex-2'-ene-6'-
      yl)]methylenebis(phosphonate),
           P1-[9-(2'-0-acetyl-3'-fluoro-3'-deoxy-ß-D-
30
      arabinofuranosyl)adenin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-
      methyl-phthalan-1-on-6-yl-(3'-methylhept-2'-ene-7'-
      yl)]methylenebis(phosphonate),
           P1-[9-(2'-O-acetyl-3'-fluoro-3'-deoxy-&-D-
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arabinofuranosyl)adenin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-
     methyl-phthalan-1-on-6-yl-(3'-methyloct-2'-ene-8'-
     yl)]methylenebis(phosphonate),
           P1-(2',3'-0-isopropylideneguanosin-5'-yl)-P2-[7-
     hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
5
     methylbut-2'-ene-4'-yl)]methylene-bis(phosphonate),
           P^{1}-(2',3'-0-isopropylideneguanosin-5'-yl)-P^{2}-[7-isopropylideneguanosin-5'-yl]
     hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
     methylpent-2'-ene-5'-yl)]methylene-bis(phosphonate),
           P^{1}-(2',3'-0-isopropylideneguanosin-5'-yl)-P^{2}-[7-isopropylideneguanosin-5'-yl]
10
     hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
     methylhex-2'-ene-6'-yl)]methylene-bis(phosphonate),
           P^{1}-(2',3'-0-isopropylideneguanosin-5'-yl)-P^{2}-[7-isopropylideneguanosin-5'-yl]
      hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
      methylhept-2'-ene-7'-yl)]methylene-bis(phosphonate),
15
           P^{1}-(2',3'-0-isopropylideneguanosin-5'-yl)-P^{2}-[7-isopropylideneguanosin-5'-yl]
      hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
      methyloct-2'-ene-8'-yl)]methylene-bis(phosphonate),
           P1-(3'-0-acety1-2'-fluoro-2'-deoxyguanosin-5'-y1)-P2-
      [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
20
      methylbut-2'-ene-4'-yl)]methylene-bis(phosphonate),
            P^{1}-(3'-O-acetyl-2'-fluoro-2'-deoxyguanosin-5'-yl)-P^{2}-
      [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
      methylpent-2'-ene-5'-yl)]methylene-bis(phosphonate),
            P^{1}-(3'-0-acetyl-2'-fluoro-2'-deoxyguanosin-5'-yl)-P^{2}-
25
      [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
      methylhex-2'-ene-6'-yl)]methylene-bis(phosphonate),
            P^1-(3'-O-acetyl-2'-fluoro-2'-deoxyguanosin-5'-yl)-P^2-
       [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
      methylhept-2'-ene-7'-yl)]methylene-bis(phosphonate),
 30
            P^{1}-(3'-O-acetyl-2'-fluoro-2'-deoxyguanosin-5'-yl)-P^{2}-
       [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
      methyloct-2'-ene-8'-yl)]methylene-bis(phosphonate),
            P^{1}-(2'-0-acetyl-3'-fluoro-3'-deoxyguanosin-5'-yl)-P^{2}-
       [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
 35
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methylbut-2'-ene-4'-yl)]methylene-bis(phosphonate),
          P1-(2'-O-acetyl-3'-fluoro-3'-deoxyguanosin-5'-yl)-P2-
     [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
     methylpent-2'-ene-5'-yl)]methylene-bis(phosphonate),
          P^{1}-(2'-O-acetyl-3'-fluoro-3'-deoxyguanosin-5'-yl)-P^{2}-
5
     [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
     methylhex-2'-ene-6'-yl)]methylene-bis(phosphonate),
          P^{1}-(2'-O-acetyl-3'-fluoro-3'-deoxyguanosin-5'-yl)-P^{2}-
     [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
     methylhept-2'-ene-7'-yl)]methylene-bis(phosphonate),
10
          P^{1}-(2'-O-acetyl-3'-fluoro-3'-deoxyguanosin-5'-yl]-P^{2}-
     [7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
     methyloct-2'-ene-8'-yl)]methylene-bis(phosphonate),
           P1-[9-(3'-0-acetyl-2'-fluoro-2'-deoxy-ß-D-
     arabinofuranosyl)guanin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-
15
     methyl-phthalan-1-on-6-yl-(3'-methylbut-2'-ene-4'-
     yl)]methylenebis(phosphonate),
           P1-[9-(3'-0-acetyl-2'-fluoro-2'-deoxy-ß-D-
     arabinofuranosyl)guanin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-
     methyl-phthalan-1-on-6-yl-(3'-methylpent-2'-ene-5'-
20
     v1) ]methylenebis (phosphonate),
           P1-[9-(3'-0-acetyl-2'-fluoro-2'-deoxy-&-D-
      arabinofuranosyl)guanin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-
      methyl-phthalan-1-on-6-yl-(3'-methylhex-2'-ene-6'-
      yl)]methylenebis(phosphonate),
25
           P1-[9-(3'-0-acetyl-2'-fluoro-2'-deoxy-ß-D-
      arabinofuranosyl)guanin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-
      methyl-phthalan-1-on-6-yl-(3'-methylhept-2'-ene-7'-
      yl)]methylenebis(phosphonate),
           P1-[9-(3'-0-acetyl-2'-fluoro-2'-deoxy-ß-D-
 30
      arabinofuranosyl)guanin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-
      methyl-phthalan-1-on-6-yl-(3'-methyloct-2'-ene-8'-
      yl)]methylenebis(phosphonate),
            P1-[9-(2'-0-acetyl-3'-fluoro-3'-deoxy-ß-D-
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arabinofuranosyl)guanin-5'-yl]-P2-[7-hydroxy-5-methoxy-4methyl-phthalan-1-on-6-yl-(3'-methylbut-2'-ene-4'yl)]methylenebis(phosphonate), P1-[9-(2'-0-acetyl-3'-fluoro-3'-deoxy-&-Darabinofuranosyl)guanin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-5 methyl-phthalan-1-on-6-yl-(3'-methylpent-2'-ene-5'yl)]methylenebis(phosphonate), P1-[9-(2'-O-acetyl-3'-fluoro-3'-deoxy-ß-Darabinofuranosyl)guanin-5'-yl]-P2-[7-hydroxy-5-methoxy-4methyl-phthalan-1-on-6-yl-(3'-methylhex-2'-ene-6'-10 yl)]methylenebis(phosphonate), P1-[9-(2'-O-acetyl-3'-fluoro-3'-deoxy-ß-Darabinofuranosyl)guanin-5'-yl]-P2-[7-hydroxy-5-methoxy-4methyl-phthalan-1-on-6-yl-(3'-methylhept-2'-ene-7'yl)]methylenebis(phosphonate), 15 P1-[9-(2'-O-acetyl-3'-fluoro-3'-deoxy-&-Darabinofuranosyl)guanin-5'-yl]-P2-[7-hydroxy-5-methoxy-4methyl-phthalan-1-on-6-yl-(3'-methyloct-2'-ene-8'yl)]methylenebis(phosphonate), P1-(2',3'-O-isopropylideneinosin-5'-yl)-P2-[7-hydroxy-20 5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylbut-2'-ene-4'-yl)]methylene-bis(phosphonate), $P^{1}-(2',3'-0-isopropylideneinosin-5'-yl)-P^{2}-[7-hydroxy-isopropylideneinosin-5'-yl)-P^{2}-[7-hydroxy-isopropylideneinosin-5'-yl]$ 5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylpent-2'ene-5'-yl)]methylene-bis(phosphonate), 25 P^{1} -(2',3'-0-isopropylideneinosin-5'-yl)- P^{2} -[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhex-2'-ene-6'-y1)]methylene-bis(phosphonate), P1-(2',3'-0-isopropylideneinosin-5'-yl)-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhept-2'-30 ene-7'-yl)]methylene-bis(phosphonate), $P^{1}-(2',3'-0-isopropylideneinosin-5'-yl)-P^{2}-[7-hydroxy-isopropylideneinosin-5'-yl)-P^{2}-[7-hydroxy-isopropylideneinosin-5'-yl]$ 5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methyloct-2'-ene-8'-y1)]methylene-bis(phosphonate), P^{1} -(3'-O-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl)- P^{2} -[7-35

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hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
                               methylbut-2'-ene-4'-yl)]methylene-bis(phosphonate),
                                                                  P^1-(3'-0-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl)-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl)-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-
                               hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
                               methylpent-2'-ene-5'-yl)]methylene-bis(phosphonate),
    5
                                                                   P^1-(3'-0-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl)-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl)-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2'-fluoro-2
                                hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
                                methylhex-2'-ene-6'-yl)]methylene-bis(phosphonate),
                                                                     P^1-(3'-0-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl)-P^2-[7-
                                  hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
10
                                  methylhept-2'-ene-7'-yl)]methylene-bis(phosphonate),
                                                                     P^1-(3'-0-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl)-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl)-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-fluoro-2'-deoxyinosin-5'-deoxyinosin-5'-yl]-P^2-[7-acetyl-2'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5'-deoxyinosin-5
                                   hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
                                   methyloct-2'-ene-8'-yl)]methylene-bis(phosphonate),
                                                                       P^{1}-(2'-0-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl)-P^{2}-[7-
  15
                                    hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
                                    methylbut-2'-ene-4'-yl)]methylene-bis(phosphonate),
                                                                       P^1-(2'-0-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl)-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl)-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3
                                     hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
                                     methylpent-2'-ene-5'-yl)]methylene-bis(phosphonate),
   20
                                                                         P^1-(2'-0-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl)-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl)-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl)-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P^2-[7-acetyl-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3'-fluoro-3
                                      hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
                                      methylhex-2'-ene-6'-yl)]methylene-bis(phosphonate),
                                                                         P^1-(2'-O-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl)-P^2-[7-
                                       hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
      25
                                       methylhept-2'-ene-7'-yl)]methylene-bis(phosphonate),
                                                                          P1-(2'-O-acetyl-3'-fluoro-3'-deoxyinosin-5'-yl]-P2-[7-
                                        hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-
                                        methyloct-2'-ene-8'-y1)]methylene-bis(phosphonate),
                                                                            P1-[9-(3'-0-acetyl-2'-fluoro-2'-deoxy-&-D-
       30
                                         arabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5-
                                         methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylbut-2'-ene-
                                          4'-yl)]methylenebis(phosphonate),
                                                                            p1-[9-(3'-0-acety1-2'-fluoro-2'-deoxy-ß-D-
                                          arabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5-
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methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylpent-2'-ene-5'-yl)]methylenebis(phosphonate), P1-[9-(3'-0-acetyl-2'-fluoro-2'-deoxy-ß-Darabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhex-2'-ene-5 6'-yl)]methylenebis(phosphonate), P1-[9-(3'-O-acetyl-2'-fluoro-2'-deoxy-ß-Darabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhept-2'-ene-7'-yl)]methylenebis(phosphonate), 10 P1-[9-(3'-O-acetyl-2'-fluoro-2'-deoxy-&-Darabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methyloct-2'-ene-8'-yl)]methylenebis(phosphonate), P1-[9-(2'-O-acetyl-3'-fluoro-3'-deoxy-ß-D-15 arabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylbut-2'-ene-4'-yl)]methylenebis(phosphonate), P1-[9-(2'-0-acetyl-3'-fluoro-3'-deoxy-&-Darabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5-20 . methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylpent-2'-ene-5'-y1)]methylenebis(phosphonate), P1-[9-(2'-0-acetyl-3'-fluoro-3'-deoxy-£-Darabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhex-2'-ene-25 6'-yl)]methylenebis(phosphonate), P1-[9-(2'-0-acetyl-3'-fluoro-3'-deoxy-&-Darabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhept-2'-ene-7'-yl)]methylenebis(phosphonate), and 30 P1-[9-(2'-0-acetyl-3'-fluoro-3'-deoxy-ß-Darabinofuranosyl)hypoxanthin-5'- yl]-P2-[7-hydroxy-5methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methyloct-2'-ene-8'-yl)]methylenebis(phosphonate).

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The compound of claim 24, wherein the compound is
     selected from the group consisting of:
          P1-(adenosin-5'-y1)-P2-(mycophenol-5'-y1)methylene-
     bis(phosphonate),
5
          P1-(adenosin-5'-yl)-P2-[7-hydroxy-5-methoxy-4-methyl-
     phthalan-1-on-6-yl-(3'- methylbut-2'-ene-4'-
     yl)]methylenebis-(phosphonate),
          P1-(adenosin-5'-yl)-P2-[7-hydroxy-5-methoxy-4-methyl-
     phthalan-1-on-6-yl-(3'- methylpent-2'-ene-5'-
10
     yl)]methylenebis-(phosphonate),
          P1-(adenosin-5'-yl)-P2-[7-hydroxy-5-methoxy-4-methyl-
     phthalan-1-on-6-yl-(3'- methylhept-2'-ene-7'-
     yl)]methylenebis-(phosphonate),
           P^{1}-(adenosin-5'-yl)-P^{2}-[7-hydroxy-5-methoxy-4-methyl-
15
     phthalan-1-on-6-yl-(3'-methyloct-2-ene-8'-yl)]methylenebis-
      (phosphonate),
           P^{1}-(2'-fluoro-2'-deoxyadenosin-5'-yl)-P^{2}-[7-hydroxy-5-
     methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylbut-2'-ene-
      4'-yl)]-methylenebis-(phosphonate),
20
           P^{1}-(2'-fluoro-2'-deoxyadenosin-5'-yl)-P^{2}-[7-hydroxy-5-
     methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylpent-2'-ene-
      5'-yl)]-methylenebis(phosphonate),
           p^1-(2'-fluoro-2'-deoxyadenosin-5'-yl)-p^2-[7-hydroxy-5-
      methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhex-2-ene-6'-
25
      yl)]-methylenebis(phosphonate),
           P1-(2'-fluoro-2'-deoxyadenosin-5'-yl)-P2-[7-hydroxy-5-
      methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhept-2'-ene-
      7'-yl)]-methylenebis(phosphonate),
           P^{1}-(2'-fluoro-2'-deoxyadenosin-5'-yl)-P^{2}-[7-hydroxy-5-yl]
30
      methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methyloct-2'-ene-
      8'-yl)]-methylenebis(phosphonate),
           P^{1}-(3'-fluoro-3'-deoxyadenosin-5'-yl)-P^{2}-[7-hydroxy-5-
      methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylbut-2'-ene-
      4'-yl)]-methylenebis(phosphonate),
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P^{1}-(3'-fluoro-3'-deoxyadenosin-5'-yl)-P^{2}-[7-hydroxy-5-
    methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylpent-2'-ene-
    5'-yl)]-methylenebis(phosphonate),
         P1-(3'-fluoro-3'-deoxyadenosin-5'-yl)-P2-[7-hydroxy-5-
    methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhex-2'-ene-
    6'-yl)]-methylenebis(phosphonate),
         P^{1}-(3'-fluoro-3'-deoxyadenosin-5'-yl)-P^{2}-[7-hydroxy-5-
    methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhept-2'-ene-
    7'-yl)]-methylenebis(phosphonate),
          P^{1}-(3'-fluoro-3'-deoxyadenosin-5'-yl]-P^{2}-[7-hydroxy-5-
    methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methyloct-2'-ene-
     8'-yl)]-methylenebis(phosphonate),
          P1-[9-(2'-fluoro-2'-deoxy-ß-D-arabinofuranosyl)adenin-
     5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-
     (3'-methylbut-2'-ene-4'-yl)]methylenebis(phosphonate),
          P1-[9-(2'-fluoro-2'-deoxy-ß-D-arabinofuranosyl)adenin-
     5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-
     (3'- methylpent-2'-ene-5'-yl)]methylenebis(phosphonate),
          P1-[9-(2'-fluoro-2'-deoxy-ß-D-arabinofuranosyl)adenin-
     5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-
20
     (3'-methylhex-2'-ene-6'-yl)]methylenebis(phosphonate),
          P1-[9-(2'-fluoro-2'-deoxy-ß-D-arabinofuranosyl)adenin-
     5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-
     (3'-methylhept-2'-ene-7'-yl)]methylenebis(phosphonate),
          P1-[9-(2'-fluoro-2'-deoxy-ß-D-arabinofuranosyl)adenin-
25
     5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-
     (3'-methyloct-2'-ene-8'-yl)]methylenebis(phosphonate),
           P1-[9-(3'-fluoro-3'-deoxy-ß-D-arabinofuranosyl)adenin-
     5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-
     (3'-methylbut-2'-ene-4'-yl)]methylenebis(phosphonate),
30
           P1-[9-(3'-fluoro-3'-deoxy-ß-D-arabinofuranosyl)adenin-
     5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-
      (3'-methylpent-2'-ene-5'-yl)]methylenebis(phosphonate),
           P1-[9-(3'-fluoro-3'-deoxy-ß-D-arabinofuranosyl)adenin-
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 $5'-y1]-p^2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-phthalan$ (3'-methylhex-2'-ene-6'-yl)]methylenebis(phosphonate), P1-[9-(3'-fluoro-3'-deoxy-&-D-arabinofuranosyl)adenin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhept-2'-ene-7'-yl)]methylenebis(phosphonate), 5 P1-[9-(3'-fluoro-3'-deoxy-&-D-arabinofuranosyl)adenin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methyloct-2'-ene-8'-yl)]methylenebis(phosphonate), P^{1} -(guanosin-5'-yl)- P^{2} -[7-hydroxy-5-methoxy-4-methylphthalan-1-on-6-yl-(3'-methylbut-2'-ene-4'-yl)]methylene-10 bis (phosphonate), P^{1} -(guanosin-5'-yl)- P^{2} -[7-hydroxy-5-methoxy-4-methylphthalan-1-on-6-yl-(3'-methylpent-2'-ene-5'-yl)]methylenebis (phosphonate), P^{1} -(guanosin-5'-yl)- P^{2} -[7-hydroxy-5-methoxy-4-methyl-15 phthalan-1-on-6-yl-(3'-methylhex-2'-ene-6'-yl)]methylenebis (phosphonate), P^{1} -(guanosin-5'-yl)- P^{2} -[7-hydroxy-5-methoxy-4-methylphthalan-1-on-6-yl-(3'-methylhept-2'-ene-7'yl)]methylenebis(phosphonate), 20 P^{1} -(guanosin-5'-y1)- P^{2} -[7-hydroxy-5-methoxy-4-methy1phthalan-1-on-6-yl-(3'-methyloct-2-ene-8'-yl)]methylenebis-(phosphonate), P^{1} -(2'-fluoro-2'-deoxyguanosin-5'-yl)- P^{2} -[7-hydroxy-5methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylbut-2'-ene-25 4'-yl)]-methylenebis(phosphonate), P^{1} -(2'-fluoro-2'-deoxyguanosin-5'-yl)- P^{2} -[7-hydroxy-5methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylpent-2'-ene-5'-yl)]methylenebis(phosphonate), $P^{1}-(2'-fluoro-2'-deoxyguanosin-5'-yl)-P^{2}-[7-hydroxy-5-yl]$ 30 methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhex-2-ene-6'yl)]methylenebis(phosphonate), $P^{1}-(2'-fluoro-2'-deoxyguanosin-5'-yl)-P^{2}-[7-hydroxy-5-yl]$ methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhept-2'-ene-7'-yl)]methylenebis(phosphonate), 35

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P^{1}-(2'-fluoro-2'-deoxyguanosin-5'-yl)-P^{2}-[7-hydroxy-5-
          methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methyloct-2'-ene-
           8'-y1) ]methylenebis(phosphonate),
                      P1-(3'-fluoro-3'-deoxyguanosin-5'-yl)-P2-[7-hydroxy-5-
          methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylbut-2'-ene-
 5
           4'-yl)]methylenebis(phosphonate),
                      P1-(3'-fluoro-3'-deoxyguanosin-5'-yl)-P2-[7-hydroxy-5-
           methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylpent-2'-ene-
           5'-y1)]methylenebis(phosphonate),
                      P1-(3'-fluoro-3'-deoxyguanosin-5'-yl)-P2-[7-hydroxy-5-
10
           methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhex-2'-ene-
           6'-yl) | methylenebis (phosphonate),
                      P1-(3'-fluoro-3'-deoxyguanosin-5'-yl)-P2-[7-hydroxy-5-
           methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhept-2'-ene-
           7'-yl)]methylenebis(phosphonate),
15
                       P1-(3'-fluoro-3'-deoxyguanosin-5'-yl]-P2-[7-hydroxy-5-
           methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methyloct-2'-ene-
            8'-y1) ]methylenebis (phosphonate),
                       P1-[9-(2'-fluoro-2'-deoxy-&-D-arabinofuranosyl)guanin-
            5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-
20
            (3'-methylbut-2'-ene-4'-yl)]methylenebis(phosphonate),
                       P1-[9-(2'-fluoro-2'-deoxy-&-D-arabinofuranosyl)guanin-
            5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-
             (3'-methylpent-2'-ene-5'-yl)]methylenebis(phosphonate),
                       P1-[9-(2'-fluoro-2'-deoxy-ß-D-arabinofuranosyl)guanin-
 25
            5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-
             (3'-methylhex-2'-ene-6'-yl)]methylenebis(phosphonate),
                        P1-[9-(2'-fluoro-2'-deoxy-&-D-arabinofuranosyl)guanin-
            5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-
             (3'-methylhept-2'-ene-7'-yl)]methylenebis(phosphonate),
 30
                        P1-[9-(2'-fluoro-2'-deoxy-&-D-arabinofuranosyl)guanin-
            5'-y1]-P^2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan-1-on-6-yl-phthalan
             (3'-methyloct-2'-ene-8'-yl)]methylenebis(phosphonate),
                        P1-[9-(3'-fluoro-3'-deoxy-ß-D-arabinofuranosyl)guanin-
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(3'-methylbut-2'-ene-4'-yl)]methylenebis(phosphonate),
          p1_[9-(3'-fluoro-3'-deoxy-&-D-arabinofuranosyl)guanin-
     5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-
     (3'-methylpent-2'-ene-5'-yl)]methylenebis(phosphonate),
5
          P1-[9-(3'-fluoro-3'-deoxy-&-D-arabinofuranosyl)guanin-
     5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-
     (3'-methylhex-2'-ene-6'-yl)]methylenebis(phosphonate),
           P1_[9-(3'-fluoro-3'-deoxy-&-D-arabinofuranosyl)guanin-
     5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-
10
     (3'-methylhept-2'-ene-7'-yl)]methylenebis(phosphonate),
           P1-[9-(3'-fluoro-3'-deoxy-&-D-arabinofuranosyl)guanin-
     5'-yl]-p2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-
     (3'-methyloct-2'-ene-8'-yl)]methylenebis(phosphonate),
           P^{1}-(inosin-5'-yl)-P^{2}-[7-hydroxy-5-methoxy-4-methyl-
15
     phthalan-1-on-6-yl-(3'- methylbut-2'-ene-4'-yl)]methylene-
     bis (phosphonate),
           P^{1}-(inosin-5'-yl)-P^{2}-[7-hydroxy-5-methoxy-4-methyl-
     phthalan-1-on-6-yl-(3'-methylpent-2'-ene-5'-yl)]methylene-
      bis (phosphonate),
20
           P^{1}-(inosin-5'-yl)-P^{2}-[7-hydroxy-5-methoxy-4-methyl-
     phthalan-1-on-6-yl-(3'-methylhex-2'-ene-6'-yl)]methylene-
      bis (phosphonate),
           P1-(inosin-5'-yl)-P2-[7-hydroxy-5-methoxy-4-methyl-
      phthalan-1-on-6-yl-(3'- methylhept-2'-ene-7'-yl)]methylene-
25
      bis (phosphonate),
           P^{1}-(inosin-5'-yl)-P^{2}-[7-hydroxy-5-methoxy-4-methyl-
      phthalan-1-on-6-yl-(3'-methyloct-2-ene-8'-yl)]methylenebis-
      (phosphonate),
           P^{1}-(2'-fluoro-2'-deoxyinosin-5'-yl)-P^{2}-[7-hydroxy-5-
 30
      methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylbut-2'-ene-
      4'-yl)]methylenebis(phosphonate),
            P^{1}-(2'-fluoro-2'-deoxyinosin-5'-yl)-P^{2}-[7-hydroxy-5-
      methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylpent-2'-ene-
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5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-phthalan-1-on-6-yl-

 $P^1-(2'-fluoro-2'-deoxyinosin-5'-yl)-P^2-[7-hydroxy-5$ methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhex-2-ene-6'yl)]methylenebis(phosphonate), P1-(2'-fluoro-2'-deoxyinosin-5'-yl)-P2-[mycophenol--6-5 (3'-methylhept-2'-ene-7'-yl)]methylenebis(phosphonate), P1-(2'-fluoro-2'-deoxyinosin-5'-yl)-P2-[7-hydroxy-5methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methyloct-2'-ene-8'-yl)]methylenebis(phosphonate), P^{1} -(3'-fluoro-3'-deoxyinosin-5'-yl)- P^{2} -[7-hydroxy-5-10 methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylbut-2'-ene-4'-yl)]methylenebis(phosphonate), P1-(3'-fluoro-3'-deoxyinosin-5'-yl)-P2-[7-hydroxy-5methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylpent-2'-ene-5'-yl)]methylenebis(phosphonate), 15 $P^1-(3'-fluoro-3'-deoxyinosin-5'-yl)-P^2-[7-hydroxy-5$ methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhex-2'-ene-6'-yl)]methylenebis(phosphonate), $P^{1}-(3'-fluoro-3'-deoxyinosin-5'-yl)-P^{2}-[7-hydroxy-5-yl]$ methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhept-2'-ene-20 7'-yl)]methylenebis(phosphonate), $P^1-(3'-fluoro-3'-deoxyinosin-5'-y1]-P^2-[7-hydroxy-5$ methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methyloct-2'-ene-8'-y1)]methylenebis(phosphonate), P1-[9-(2'-fluoro-2'-deoxy-ß-D-arabinofuranosyl)-25 hypoxanthin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-methylphthalan-1-on-6-yl-(3'-methylbut-2'-ene-4'-yl)]methylenebis (phosphonate), P1-[9-(2'-fluoro-2'-deoxy-ß-Darabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5-30 methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylpent-2'-ene-5'-yl)]methylenebis(phosphonate), P1-[9-(2'-fluoro-2'-deoxy-ß-Darabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5methoxy-4-methyl-phthalan-1-on-6-yl-(3'-methylhex-2'-ene-35

5'-yl)]methylenebis(phosphonate),

P1-[9-(2'-fluoro-2'-deoxy-ß-D-arabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-methylphthalan-1-on-6-yl-(3'-methylhept-2'-ene-7'-yl)]methylenebis (phosphonate), P1_[9-(2'-fluoro-2'-deoxy-ß-D-arabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-methylphthalan-1-on-6-yl-(3'-methyloct-2'-ene-8'-yl)]methylenebis (phosphonate), P1-[9-(3'-fluoro-3'-deoxy-ß-D-arabinofuranosyl)-10 hypoxanthin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-methylphthalan-1-on-6-yl-(3'-methylbut-2'-ene-4'-yl)]methylenebis (phosphonate), P1-[9-(3'-fluoro-3'-deoxy-ß-D-arabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-methyl-15 phthalan-1-on-6-yl-(3'-methylpent-2'-ene-5'-yl)]methylenebis (phosphonate), p1_[9-(3'-fluoro-3'-deoxy-ß-D-arabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-methylphthalan-1-on-6-yl-(3'-methylhex-2'-ene-6'-yl)]methylene-20 bis (phosphonate), P1-[9-(3'-fluoro-3'-deoxy-ß-D-arabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-methylphthalan-1-on-6-yl-(3'-methylhept-2'-ene-7'-yl)]methylenebis (phosphonate), and 25 p1_[9-(3'-fluoro-3'-deoxy-ß-D-arabinofuranosyl)hypoxanthin-5'-yl]-P2-[7-hydroxy-5-methoxy-4-methylphthalan-1-on-6-yl-(3'-methyloct-2'-ene-8'-yl)]methylene-

6'-yl)]methylenebis(phosphonate),

bis (phosphonate).

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